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5, 2005, 19:34:18; Search time 104.746 Seconds (without alignments) 73.847 Million cell updates/sec
GenCore version 5.1.6
(c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                     2105692 seqs, 386760381 residues
                                                                                                                                                                                      US-09-780-669-114_COPY_120_139
                                                                    OM protein - protein search, using sw model
                                                                                                                                                                                                                       LLVVPAIKKDYGSQEDFTQV 20
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Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 200000000

Minimum DB Maximum DB

Post-processing: Minimum Match 0% .

Maximum Match 100%
Listing first 45 summaries

geneseqp1980s:\*
geneseqp1990s:\*
geneseqp2000s:\*
geneseqp2001s:\* geneseqp2002s:\* geneseqp2003as:\* geneseqp2003bs:\* geneseqp2004s:\* A\_Geneseq\_16Dec04:\* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Description	Aam01172 Human pro	Human	7 Human	9 Prosta	Abb95277 Epitope m	Abr54389 Prostate		Adg26388 Human pro	Human	_	Adp19299 Human sec	Add69590 Human REM	Adp81123 Protein o	Adr65994 Human pro	Adr66892 Human pro	Aaw75060 Human sec	Abo01936 Novel hum	Aag62153 Human P50	Abb89113 Human pol		Aaw59954 Amino aci	Aaw71870 Amino aci	Aaw58380 Human sec	Aay82003 Human imm	Abq94412 Human pro
ID	AAM01172	AAU69817	AAG99057	ABU71708	ABB95277	ABR54389	ADB13972	ADG26388	AAY11883	AAY35991	ADP19299	ADD69590	ADP81123	ADR65994	ADR66892	AAW75060	AB001936	AAG62153	ABB89113	AAW69386	AAW59954	AAW71870	AAW58380	AAY82003	ABG94412
Length DB	20 4	20 4	20 4	20 4	20 5	20 6	20 7	20 7	108 2	126 2	126 8	172 7	174 8	214 8	214 8	233 2	233 6	•	240 5	241 2		241 2	241 2	241 3	241 3
* Query Match Le	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
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AAM01118 AAC69764 AAB76801 AAB77654 AAB99003 ABB771654 AAB99673 AAB995223 AAB995223 AAB95601 AAB75601 AAB760100	ABB09512
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0 7 8 9 0 0 11 0 12 14 4 4 4 4 4 10 10 10 10 10 10 10 10 10 10 10 10 10	45

## ALIGNMENTS

New polynucleotide encoding a prostate-specific protein, for diagnosing, monitoring and treating prostate cancer in a patient and for use in Human prostate-specific peptide used in epitope mapping studies #29. Harlocker SL, Jiang Y, Reed SG; Retter MW, Stolk JA, Skeiky YAW; Human, prostate cancer, prostate-specific, diagnosis, vaccine, cytostatic, gene therapy, metastasis. AAM01172 standard; peptide; 20 AA Xu J, Dillon DC, Mitcham JL, Kalos MD, Fanger GR, Day CH, Wang A, Meagher MJ; 16-JAN-2001; 2001WO-US001574. 14-JAN-2000; 2000US-00483672. (first entry) (CORI-) CORIXA CORP. WPI; 2001-425873/45. WO200151633-A2. Homo sapiens. 19-JUL-2001. 04-OCT-2001 AAM01172; vaccines RESULT 1 **AAM01172** 

Claim 2; Page 403; 543pp; English.

The present invention describes polynucleotide sequences (I) which encode prostate-specific proteins (II). (I) and (II) have cytostatic activity, and and can be used in vaccine production and gene therapy. (I), (II), antibodies to (II), fusion proteins comprising (II), and isolated real prepared using (I) or (II) are used treat cancer in a patient. (I) and the antibodies are also used in the detection of cancer in a patient. The cancer that is diagnosed or treated is particularly prostate cancer. (I) and (II) can be used in vaccines. The antibodies or (I) can be used for monitoring the progression of cancer in a patient. (I) and of cancer in a patient. (I) and cancer in a patient. (I) are used for the used to improve diagnostic and therapeutic methods for prostate cancer. They can indicate the level of metastasis as well as the prostate

Gaps

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Length

100.0%; Score 100; DB 4; 100.0%; Pred. No. 1.3e-09; tive 0; Mismatches 0;

Conservative

20

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antigenic epitopes or domains of prostate specific proteins
                                                                                              1 LLVVPAIKKDYGSOEDFTQV
                                                            Similarity
20; Conserv
                           Sequence 20 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to isolated prostate-specific polymucleotides, polypeptides, fusion proteins of the polypeptides, antibodies raised against the polypeptides (or antigenic epitopes derived from them) and antigen-presenting cells expressing the polypeptides. The antibodies are useful for detecting the presence of cancer, especially prostate cancer. The polypeptides, polymucleotides and the antigen-presenting cells are useful for stimulating and/or expanding T cells specific for a tumour protein, and for inhibiting the development of cancer especially prostate cancer. Compositions comprising the polymucleotide and/or polypeptide are useful for stimulating an immune response, and for treating cancer. The oligonucleotide is useful for detecting cancer. The prostate specific peptide of the invention. The peptides either represent
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                                                                                                                                                                                                                                                                                             Human; prostate cancer; ss; cytostatic; immunostimulant; tumour; antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New human prostate-specific polypeptides and polynucleotides useful for the diagnosis and treatment of cancer, especially prostate cancer.
      volume. AAH93357 to AAH93944 and AAM01115 to AAM01318 represent polymiclectide and amino acid sequences used in the exemplification of the present invention
                                                                                                  Gaps
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Carter D;
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                                                                            Length 20;
                                                                                                 Indels
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Fanger GR, Retter MW, Stolk JA, Day CH, Vedvick TS,
Li SX, Wang A, Skeiky YAW, Hepler WT, Henderson RA;
                                                                                                                                                                                                                                                                          Human prostate protein P703P antigenic epitope #14
                                                                           100.0%; Score 100; DB 4;
100.0%; Pred. No. 1.3e-09;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 2; Page 404; 579pp; English.
                                                                                                                                                                                                        AAU69817 standard; peptide; 20 AA
                                                                                                                                       1 LLVVPAIKKDYGSQEDFTQV 20
                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-00568100.
2000US-00570737.
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2000US-00636215.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-SEP-2000; 2000US-00657279.
                                                                                                                                                                                                                                                                                                                                                                                                       27-MAR-2001; 2001WO-US009919.
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                                                                                                                                                                                                                                                      (first entry)
                                                                                                   20; Conservative
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                                                                             Query Match
Best Local Similarity
Matches 20; Conserv
                                                       Sequence 20 AA;
                                                                                                                                                                                                                                                                                                                                                            WO200173032-A2.
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29-AUG-2000;
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The present invention describes an isolated polypeptide (P1) comprising at least an immunogenic portion of a prostate-specific protein, or its variant. Also described are polynucleotides (N1) encoding (P1). (P1) and (N1) have cytostatic activity and can be used in vaccine production. The polypeptides, nucleic acids and antibodies from the present invention are useful in the diagnosis and therapy of prostate cancer. Prostate specific genes P704P, P774P, P775P and B305D are located in a genomic Prostate specific antigen (P8A) P50LS was located on chromosome 1.

AAH884671 to AAH85143 and AAG99000 to AAG99077 represent polynucleotide and polypeptide sequences used in the exemplification of the present
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Isolated polypeptide comprising at least an immunogenic portion of prostate-specific protein, useful in the diagnosis and therapy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Harlocker SL, Jiang Y, Reed SG;
, Day CH, Skeiky YAW, Wang A;
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                                                                                                                                                                                                                                                                                                                                                                 Human; prostate cancer; therapy; diagnosis; cat eye syndrome; chromosome 22q11.2; prostate-specific protein; chromosome 1; prostate specific antigen; PSA.
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                                                                                                                                                                                                                                                                                                                     Human prostate-specific epitope mapping peptide #29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 3; Page 303; 325pp; English.
                                                                                                                                                         AAG99057 standard; peptide; 20 AA.
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Kalos MD, Retter MW, Stolk JA,
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LLVVPAIKKDYGSQEDFTQV 20
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                                                                                                                                                                                                                                                                      (first entry)
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18-NOV-1999;
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ABB95277 standard; peptide; 20 AA.
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970S-00904804.
980S-00030607.
980S-00115453.
980S-00115453.
990S-00132149.
990S-00232149.
990S-0043946.
990S-0043946.
990S-0043946.
2000US-0058100.
2000US-0058100.
2000US-00593793.
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                                                                                                                                   Local Similarity 100.
nes 20; Conservative
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MITCHAM J L.
HARLOCKER S L
JIANG Y.
KALOS M D.
FANGER G R.
RETTER M W.
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DAY C H.
VEDVICK T S.
CARTER D.
LI S X.
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                                                                                 Sequence 20 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unidentified.
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06-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene therapy
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(JIAN/)
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Matches
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ABB95277
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Prostate specific protein and its encoding polynucleotide, useful for the treatment and diagnosis of prostate cancer.
                                                                                                                                                                                                 Prostate cancer; vaccine; gene therapy; cytostatic; fusion protein; immunogen; cancer; prostate specific antigen; PSA; prostatic acid phosphatase; PAP; prostate specific membrane antigen; PSMA.
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Carter D;
Hural J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dillon DC, Mitcham JL, Harlocker SL, Jiang Y, GR, Retter MW, Stolk JA, Day CH, Vedvick TS, Wang A, Skeiky YAW, Hepler WT, Henderson RA, Pb, Houghton RL, Y De Bassolscv, Foy TW;
                                                                                                                                                                 Prostate cancer therapy associated peptide #30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 18; SEQ ID NO 522; 85pp; English.
                                                              ABU71708 standard; peptide; 20 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                        04-OCT-1999; 99US-0157455P.
04-OCT-2000; 2000US-00679272.
28-MAR-2001; 2001US-00822827.
                                                                                                                                                                                                                                                                                                                                                                                         29-JUN-2001; 2001US-00895793.
                                                                                                                                 (first entry)
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MCNEILL P D.
HOUGHTON R L.
Y DE BASSOLS C V.
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MITCHAM J L.
HARLOCKER S L.
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WANG A.
SKEIKY Y A W.
HEPLER W T.
HENDERSON R A.
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DAY C H.
VEDVICK T S.
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KALOS M D.
FANGER G R.
RETTER M W.
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                                                                                                                                                                                                                                                                                                                      US2002192763-A1.
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                                                                                                                                 10-JUN-2003
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Mcneill PD,
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                                            ABU71708

XX AC ABU7

XX ABU7

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prostate cancer therapy associated peptide. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from the US patent office at seqdata.uspto.gov/sequence.html?DocID=US20020192763
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                                                                                                                                                                                                                                                  100.0%; Score 100; DB 4; Length 20; 100.0%; Pred. No. 1.3e-09; ive 0; Mismatches 0; Indel8
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Claim 2; SEQ ID NO 522; 87pp; English

WPI; 2002-255649/30.

Fanger ( Li SX,

20

1 LLVVPAIKKDYGSQEDFTQV

..

Conservative

Query Match Best Local Similarity ----mes 20; Conserva

Sequence 20 AA;

1 LLVVPAIKKDYGSQEDFTQV 20

.<u>Q</u> δ

ABR54389 standard; protein; 20

(first entry)

28-AUG-2003

ABR54389;

09-MAY-2001; 2001US-00852911. 29-JUN-2001; 2001US-00895814. 10-DEC-2001; 2001US-00012896. 09-MAY-2002; 2002WO-US014753.

WO200289747-A2 Homo sapiens

14-NOV-2002.

(CORI-) CORIXA CORP

WPI; 2003-167130/16.

Carter D, I Mcneill PD, Kalos MD,

, ה

Deng T;

Mon Feb

(WANG/) WANG A. (SKEI/) SKEIKY Y A W. (HEPL/) HEPLER W T. (HEND/) HENDERSON R A.

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The present invention relates to novel prostate-specific proteins (PSP) and their coding sequences are useful for stimulating an immune response in a patient, or for treating prostate cancer in a patient and for determining, detecting or diagnosing the presence of a cancer in a patient. The present sequence was used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; prostate specific cDNA; cytostatic; immunostimulant; gene therapy; cell therapy; vectine; T-cell epitope; class I major histocompatibility complex allele; MHC; prostate cancer; tumour; antigen presenting cell; epitope.
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0
                                                                                                                                                                         Length 20
                                                                                                                                                                                                                                                                                                                                                                                                                                           Human prostate protein P503S epitope mapping peptide #2099.
                                                                                                                                                                                                      Indels
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                                                                                                                                                                       100.0%; Score 100; DB 6; 100.0%; Pred. No. 1.3e-09;
                                                                                                                                                                                                      0; Mismatches
Example 18; Page 470-471; 691pp; English.
                                                                                                                                                                                                                                                                                                                                              ADB13972 standard; peptide; 20 AA.
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9805-00020956
9805-00115453
9805-00115453
9905-00159812
9905-00288946
9905-00288946
9905-0049313
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2000US-00536857.
2000US-00568100.
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2000US-00636215.
2000US-00651236.
2000US-00657279.
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2000US-00709729.
2001US-00759143.
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2000US-00593793.
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2001US-00012896.
2002US-00144678.
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                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                      Local Similarity 100. es 20; Conservative
                                                                                                             illustrate the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US2003185830-A1
                                                                                                                                         Sequence 20 AA;
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27-MAR-2000;
09-MAY-2000;
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13-JUN-2000;
27-JUN-2000;
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06-SEP-2000;
02-OCT-2000;
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                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                              ADB13972;
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Matches
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                                                                                                                                                                                                                                                          The present invention provides prostate-specific coding sequences and their encoded proteins. These can be used in the diagnosis and treatment of cancers, particularly prostate cancer. The present sequence is a peptide described in the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dillon DC, Mitcham JL, Harlocker SL, Jiang Y, Henderson RA; 4D, Fanger GR, Retter MW, Stolk JA, Day CH, Vedvick TS; D, Li SX, Wang A, Skeiky YAW, Hepler WT, Hural J; PD, Houghton RL, Vinals Y De BassolsC, Foy TW, Watanabe Y;
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prostate tumour specific related peptide for epitope mapping SEQ ID
                                                                        Kalos MD;
Carter D;
                                                                                                                                                                New prostate-specific polynucleotides for diagnosing and treating diseases, in particular prostate cancer, and as markers for the progression of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cytostatic; gene therapy; prostate-specific protein; PSP; human; immune response; prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                          Length 20;
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                                                                   Dillon DC, Mitcham JL, Harlocker SL, Jiang Y, GR, Retter MW, Stolk JA, Day CH, Vedvick TS, Wang A, Skeiky YAW, Hepler WT, Henderson RA,
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                                                                                                                                                                                                                                                                                                                                                                       100.0%; Score 100; DB 5; 100.0%; Pred. No. 1.3e-09;
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The invention relates to an isolated polypeptide comprising no more than 1-542 amino acids of ADB11553 comprising a sequence ADB14617. The peptides comprise a fragment ADB1353 of that contain naturally processed T-cell epitoppes for 3 class I major histocompatibility complex (MHC) and 1-642 amino acids of ADB11553 is a polypeptide encoded by a human prostate specific CDNA, one of 648 disclosed as new Also included are nucleic acids necoding the proteins and peptides, expression vectors, a host cell cDNA, one of 648 disclosed as new Also included are nucleic acids composing the protein or peptide, detecting the presence of a cancer in a patient (comprising contacting a patient camprising contacting a patient camprising contacting a patient camprising or contacting a patient comprising to contacting a patient camprising the peptides or proteins, stimulating or expanding T cells appetite or the agent and comparing the amount of polypeptide that binds to the agent and comparing the amount of polypeptide that binds to the agent and comparing the amount of polypeptide to a predetermined correct appearing as ADB1359, detecting the amount of polypeptide to a predetermined correct of a author protein comprising contacting T cells specific for a tumour protein comprising contacting the predetermined comprising determined to repetides or the isolated T cell population, treating prostate cancer in a patient and treating prostate cancer in a patient comprising contacting cluster of differentiation (CD4+) and/or CD8+ T cells the protein comprising the presenting cluster of differentiation (CD4+) and/or CD8+ T cells the protein contacting cluster of differentiation (CD4+) and/or CD8+ T cells specific for antigen-presenting cells expressing the nucleic acid, are used to encode the protein and present esquence is an epitope or estimulate or expand T cells specific for a unmour protein. The peptides or treat cancer in a patient. The present esquence is an epitope or peptide derived from one of the prostate specific proteins of t
                                                                                                                                                     immune
                                                                                                                                           New isolated polypeptide for use in a vaccine for stimulating an in response, or for treating or diagnosis cancer, preferably prostate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           segdata.uspto.gov/sequence.html?DocID=20030185830
                                                                                                                                                                                                                                               Example 18; Page; 101pp; English.
                                                   Kalos MD;
                                                                                                 WPI; 2003-756193/71.
(CORI-) CORIXA CORP.
                                                Xu J, Stolk JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 20 AA;
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2000US-00651236. 2000US-00657279. 2000US-00679426. 2000US-00685166.

2000US-00709729 2001US-00780669

2001US-00759143

2001US-00012896

10-DEC-2001;

29-JUN-2001 09-MAY-200

(CORI-) CORIXA CORP.

2000US-00593793. 2000US-00605783. 2000US-00636215.

2000US-00570737

12-MAY-2000; -JUN-2000; 27-JUN-2000; 29-AUG-2000; 06-SEP-2000; 10-OCT-2000; 12-JAN-2001;

9705-00904804 9805-00020956 9805-00015453 9805-00115453 9805-00159812 9905-00288946 9905-00288946 9905-0043686

15-JAN-1999 09-APR-1999

09-MAY-2002; 2002US-00144678

01-AUG-1 09-FEB-1 25-PEB-

US2003157089-A1

21-AUG-2003

2000US-00483672. 2000US-00536857. 2000US-00568100.

14-JAN-2000;

18-NOV-1999

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Gaps
                             ö
              Length 20;
                            Indels
                            .
             100.0%; Score 100; DB 7; 100.0%; Pred. No. 1.3e-09;
                            Mismatches
                            ö
                            Conservative
                    Similarity
Query Match
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20 1 LLVVPAIKKDYGSQEDFTQV

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Human; prostate-specific polypeptide; prostate cancer; cytostatic.
                                                                                  Human prostate-specific polypeptide #58.
                    ADG26388 standard; peptide; 20
                                                             (first entry)
                                                             26-FEB-2004
                                         ADG26388;
RESULT 8
           ADG26388
                    8XXXXXXXXXXX
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Homo sapiens

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The invention relates to human prostate-specific polypeptides and the polymucleotides encoding them. The invention also relates to an isolated antibody or its antigen-binding fragment that specifically binds a polypeptide of the invention, a method of detecting cancer in a patient comprising contacting a biological sample of the patient with an agent that binds a prostate-specific polypeptide and comparing the amount of bound polypeptide compared to a prodetermined cut-off value and a fusion protein comprising a prostate-specific polypeptide. The sequences of the invention are used to diagnose and treat cancer, particularly prostate cancer. This sequence represents a human prostate-specific polypeptide of the invention. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New polynucleotides encoding prostate specific polypeptides isolated from a human prostate tumor cDNA library are useful to diagnose and treat cancer particularly prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xu J, Dillon DC, Mitcham JL, Harlocker SL, Jiang Y, Henderson R Kalos MD, Fanger GR, Retter MW, Stolk JA, Day CH, Vedvick TS; Carter D, Li SX, Wang A, Skeiky YAW, Hepler WT, Hural J; Mcneill PD, Houghton RL, Vinals Y De BassolsC, Foy TM, Watanabe Meagher MJ, Deng T;
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$\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2}\frac{1}{2
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Gaps ö 100.0%; Score 100; DB 7; Length 20; 100.0%; Pred. No. 1.3e-09; ive 0; Mismatches 0; Indels Query Match Best Local Similarity 100.0 Matches 20; Conservative

cell movement;

cellular differentiation; immune system regulator; anti-inflammatory; haematopoiesis regulator; tissue growth regulator; tumour inhibitor; reproductive hormone regulator; chemotaxis; chemokinesis; gene therapy;

qenetic disease.

Homo sapiens WO9931236-A2.

protein; human; cytokine; cellular proliferation;

Secreted

Extended human secreted protein sequence, SEQ ID NO. 240.

(first entry)

13-SEP-1999

AAY35991;

AAY35991 standard; protein; 126 AA.

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human secreted proteins expressed in prostate, and encode the proteins purent secreted proteins expressed in prostate, and encode the proteins given in AAY11716 to AAY11993 respectively. The proteins given represent the signal peptide and an N-terminal fragment of a secreted protein. The roducts are also be used for producing secreted human gene nucleic acid sequences can be used for producing secreted human gene therapy. The proteins obtained may have cytokine activity, cell proliferation and differentiation activity, haematopoiesis regulating activity, tissue growth regulating activity, reproductive hormone regulating activity, receptor/ligand activity, anti-inflammatory activity, tumour inhibition activity or other activities. The products can be used in forensic, gene therapy and chromosome mapping products.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequences. The nucleic acids encoding the signal peptides can be used for directing extracellular secretion of a polypeptide or the insertion of a polypeptide into a membrane, or importing a polypeptide into a cell
                                                                                                                                                                                                                                                               Human; secreted protein; EST; expressed sequence tag; diagnosis; forensic; gene therapy; chromosome mapping; signal peptide; prostate; upstream regulatory sequence; cytokine activity; cell proliferation; differentiation; haematopoiesis regulation; tissue growth regulation; reproductive hormone regulation; chemotactic; chemokinetic; haemostatic; thrombolytic; anti-inflammatory; tumour inhibition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New isolated prostate-derived nucleic acids - used to develop products which may have cytokine, immune regulatory, haematopoiesis regulating, anti-inflammatory or tumour inhibition activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lacroix B;
                                                                                                                                                                                                                              Human 5' EST secreted protein SEQ ID No: 483.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Duclert A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 34; Page 605; 675pp; English
AAY11883 standard; protein; 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98WO-IB001232.
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                                                                                                                                                                                         (first entry)
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N-PSDB; AAX40605.
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                                                                                                                                                    AAY11883;
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Dumas Milne Edwards J;

Bougueleret L, Duclert A,

(GEST ) GENSET

WPI; 1999-385906/32.

N-PSDB; AAX97675

97US-0069957P. 98US-0074121P. 98US-0081563P. 98US-0096116P.

98WO-IB002122

17-DEC-1998; 17-DEC-1997; 09-FEB-1998; 13-APR-1998; 10-AUG-1998

24-JUN-1999

New isolated human secreted proteins.

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This sequence is encoded by an extended human secreted protein coding sequence of the invention. The secreted proteins can be used in treating or controlling a variety of human conditions. The secreted proteins may act as cytokines or may affect cellular proliferation or differentiation or may act as immune system regulators, haematopoiesis regulators, tissue growth regulators, regulators of reproductive hormones or cell movement or have chemotactic/chemokinetic, receptor/ligand, anti-inflammatory or tumour inhibition activity. The DNAs can be used in forensic procedures to identify individuals or in diagnostic procedures to identify individuals or in diagnostic procedures to identify the genes corresponding to the extended cDNAs. They are also useful for constructing a high resolution map of the human chromosomes. They can also be used for gene therapy to control or treat genetic diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 9; Page 267-268; 516pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADP19299 standard; protein; 126 AA.
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 126 AA;
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ADP19299
1D ADP193
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AC ADP193
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Gaps

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100.0%; Score 100; DB 2; Length 108; 100.0%; Pred. No. 9.2e-09; tive 0; Mismatches 0; Indels

Conservative

Local Similarity les 20; Conserv

Best Loc Matches

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Query Match

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New human receptors and membrane-associated proteins (REMAP), useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant REMAP expression e.g. cancer, AIDS, atherosclerosis, or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel isolated polypeptide comprising a human receptor and membrane-associated protein (REMAP). The polypeptide of the invention demonstrates cytostatic, antiarteriosclerotic, anticonvulsant, nootropic, neuroprotective, cerebroprotective, anti-HIV, antiallergic, antinflammatory and thyromimetic activities and may be useful for treating and disponsing various disorders including those which are cell proliferative such as cancer and atherosclerosis, neurological including epilepsy, Huntington's disease and stroke, immune/inflammatory particularly AIDS and allergies and developmental such as hypothyroidism and Cushing's syndrome, as well as infections. The current sequence is that of the human REMAP protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                Duggan BM, Yang J, Gietzen KJ, Lee SY, Tang YT, Azimzai Y;
Chawla NK, Warren BA, Barroso I, Becha SD, Yue H, Lehr-Mason PM;
Thangavelu K, Lee S, Emerling BM, Kable AB, Khare R, Baughn MR;
Gandhi AR, Tran UK, Richardson TW, Marquis JP, Lal PG, Forsythe IJ;
Hee EA, Swarnaka A, Kallick DA, Griffin JA, Bliott VS, Gorvad AB;
Hafalia AJA, Ison CH, Jin P, Jiang X, Jackson AA, Bhatia U;
Burrill JD, Blake JJ, Ho A, Zheng W, Gao J;
 epilepsy; Huntington's disease; stroke; immune; inflammatory; AIDS;
allergy; developmental; hypothyroidism; Cushing's syndrome; infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       normal; neoplastic; ovarian; ovarian specific nucleic acid; OSNA; metastatic; cancer; vaccine; cytostatic; human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 100; DB 7; Length 172; 100.0%; Pred. No. 1.6e-08; cive 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein of human ovarian specific gene, SEQ ID No 157.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID NO 19; 298pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADP81123 standard; protein; 174 AA.
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                                                                                                                                                                                               13-NOV-2001, 2001US-0333097P.
15-NOV-2001, 2001US-0335274P.
14-DEC-2001, 2001US-034642P.
18-DEC-2001, 2001US-0342166P.
11-JAN-2002, 2002US-0347580P.
                                                                                                                                                               13-NOV-2002; 2002WO-US036759.
                                                                                                                                                                                                                                                                                           14-JAN-2002; 2002US-0348687P.
                                                                                                                                                                                                                                                                                                                               (INCY-) INCYTE GENOMICS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               09-SEP-2004 (first entry)
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Best Local Similarit,
...-hes 20; Conservative
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N-PSDB; ADD69637.
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                                                                                          WO2003048305-A2.
                                                        Homo sapiens.
                                                                                                                              12-JUN-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           infections.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to human cDNA sequences that encode human secreted proteins. The invention also relates to an antibody that specifically binds to a polypeptide of the invention and a method of binding the polypeptide to an antibody. The polymucleotides are useful for expressing the entire secreted proteins which they encode and for distinguishing human tissues and cells, and for distinguishing between human tissues and cells, and for distinguishing between human tissues and cells, and for colypeptides are useful in forensic procedures or disquestive individuals with genetic diseases resulting from abnormal expression of the genes corresponding to the cDNAs. The sequences are also useful in gene therapy to control or treat genetic diseases are sequence are human secreted polypeptide of the invention. Note: The sequence data for this patent did not form part of the printed specification but, was obtained in electronic format from USPTO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                       New isolated polynucleotide encoding secreted polypeptide, useful for gene therapy, or in diagnostic procedures to identify individuals having genetic diseases resulting from abnormal expression of the genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human; receptor and membrane-associated protein; REMAP; cytostatic; antiatteriosclerotic; anticonvulsant; nootropic; neuroprotective; cerebroprotective; anti-HIV; antiallergic; antinflammatory; thyromimetic; cell proliferative; cancer; atherosclerosis; neurological;
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                                   Human; secreted protein; genetic disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 2; SEQ ID NO 555; 113pp; English.
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Human secreted polypeptide #150
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15-SEP-2000; 2000US-00663600.
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99WO-IB000282.
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N-PSDB; ADP18894.
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hes 20; Conserv
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                                                                       Homo sapiens.
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09-FEB-1999;
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Gaps

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The invention relates to novel isolated nucleic acid molecules and polypeptides present in normal and neoplastic ovarian cells. These comprise a nucleic acid sequence encoding any of the 167 amino acid sequences (c.g. 438, 237 or 233 amino acids) fully defined in the comprise a nucleic acid sequence encoding any of the 167 amino acid sequences (c.g. 438, 217 or 233 amino acids) fully defined in the specification (SEQ. ID NOs: ADP81055 to ADP81054) and comprises any of the 128 nuclecide sequences (c.g. 4798, 1494 or 1691 bp) fully defined in the specification (SEQ. ID NOs: ADP80957 to ADP81094). The invention further comprises: a method for determining the presence of a ovarian specific nucleic acid (OSNA) in a sample; a vector comprising the above nucleic acid molecule; a polypeptide encoded by the nucleic acid molecule cited above; an antibody continued for determining the above nucleic acid molecule; a polypeptide encoded by the nucleic acid molecule cited above; an antibody continued for determining the presence of an ovarian specific protein in a sample; a method for diagnosing or monitoring the presence of cancer in a patient, the kit comprising a means for conformation the presence of the above nucleic acid molecule or conforming the presence of the above nucleic acid molecule or conforming the presence of the above nucleic acid molecule or conforming the presence of the above nucleic acid molecule or cycostatic activity. The isolated nucleic acid molecules and polypeptides have conformed nucleic acid molecules and polypeptides have conformed the acid molecules and polypeptides have conformed ancer; and method of for acid molecules and polypeptides can be used to create a vaccine. The isolated nucleic acid molecules and polypeptides can be used for all and an expense and method of conforming and molecules and polypeptides and polypeptides and method of conforming and method of confo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cancer and treating ovarian cancer. This sequence represents the protein of an ovarian specific gene of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New ovarian specific nucleic acid molecules and polypeptides useful for diagnosing, preventing or treating ovarian cancer, for producing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for diagnosing or monitoring the presence and metastases of ovarian
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 12; SEQ ID NO 157; 754pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Sun Y, Liu S,
                                                                                                                                                                                                                                             2002US-0431301P.
2002US-0431321P.
2003US-0484584P.
                                                                                                                                                                                            08-DEC-2003; 2003WO-US038855
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30-JUN-2003; 2003US-0484584P
07-NOV-2003; 2003US-0518607P
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                                                                                                                                                                                                                                                                                                                                                                                    (DIAD-) DIADEXUS INC.
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                            Homo sapiens
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ö Gaps ö 100.0%; Score 100; DB 8; Length 174; 100.0%; Pred. No. 1.6e-08; tive 0; Mismatches 0; Indels ( 1 LLVVPAIKKDYGSQEDFTQV 20 Conservative Query Match Best Local Similarity 20; Matches

27 LLVVPAIKKDYGSQEDFTQV

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ADR65994; RESULT 14
ADR65994
ID ADR65
XX
AC ADR65
XX
DT 02-DE

ADR65994 standard; protein; 214 AA.

(first entry)

02-DEC-2004

Human prostatic carcinoma derived protein SEQ ID 190 

#1.

human; cytostatic; diagnosis; prostatic cancer; differential expression analysis.

Homo sapiens.

WO2004076614-A2.

10-SEP-2004

22-FEB-2004; 2004WO-DE000433

27-FEB-2003; 2003DE-01009985. 14-MAY-2003; 2003DE-01022134.

HINZMANN B. (HINZ/)

Chen H;

(DAHL/) (ROSE/) (HERM/)

DAHL E. ROSENTHAL A. HERMANN K. PILARSKY C. (PILA/)

Dahl E, Rosenthal A, Hermann K, Pilarsky C, Specht Beckmann G, Bruemmendorf T, Kinnemann H, Roepcke S; Staub E; Schmitt A, Xinzhong L, Hinzmann B,

WPI; 2004-653386/63.

New nucleic acids, and encoded proteins, from prostatic cancer tissue, useful for diagnosis, treatment and in screening for specific binding agents.

Claim 2; Page 585; 1607pp; German.

This invention describes novel cytostatic polynucleotide and polypeptide sequences which can be used in a method for diagnosing prostatic cancer or the risk of developing prostatic cancer. Diagnosis is based on determining over transcription or over expression of the sequences in prostatic tissue. Screening for inhibitors of the sequences or detection broatestic tissue. Screening for inhibitors of the sequences or detection or opinionally after deconvolution of mixtures. Detection of a predetermined minimum level of the reporter indicates the presence of twour cells. Inhibitors can be chosen from antisense oligonucleotides, short-interfering RNA or ribozymes; an organic molecule of molecular weight below 5000, preferably 300, that binds to the polypeptide; a (monoclonal) antibody (Ab) against the polypeptide; a (monoclonal) antibody directed against Ab or any of the above derivatised with a reporter group, cell toxin, immunostimulatory molecules and/or radioisotope. The polypuncleotides are identified in human prostatic cancer by differential expression analysis, using DNA microarrays, between normal and tumorous fisques, with (over) expression analysis, using by quantitative PCR. Analysis of prostatic cancer samples showed that CD24 was upregulated in many of them. Sections of tissue, isolated from prostatic cancer patients, or subjects at risk, were incubated sequentially with anti-human CD4 murine monoclonal antibodies; biotinylated second antibody, streptavidin-conjugated horseradish peroxidase and then diaminobenzidine as colour former (brown). The samples were counterstained with hemalum (blue). Malignant cells stained strongly but non-malignant cells only weakly. In 15 of 63 samples of adenocarcinoma, membrane and cytoplasmic staining was very strong, and lymph node metastases were also stained. ADR65805-ADR66584 represent the polynucleotide and polypeptide sequences used in the method of the

Sequence 214 AA;

nvention

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93 LLVVPAIKKOYGSQEDFTQV 112
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Human prostatic carcinoma derived DNA SEQ ID 190 #4.
                      human; cytostatic; diagnosis; prostatic cancer;
ADR66892 standard; protein; 214 AA.
                         differential expression analysis.
           (first entry)
           02-DEC-2004
     ADR66892;
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WO2004076614-A2. Homo sapiens. 10-SEP-2004.

22-FEB-2004; 2004WO-DE000433. 27-FEB-2003; 2003DE-01009985. 14-MAY-2003; 2003DE-01022134.

(HINZ/) HINZMANN B. DAHL E.

ROSENTHAL A. HERMANN K. (PILA/) PILARSKY C. (ROSE/) (HERM/)

Specht T; Rosenthal A, Hermann K, Pilarsky C, Specht G, Bruemmendorf T, Kinnemann H, Roepcke S; Dahl E, Beckmann ( Staub E; Schmitt A, E Xinzhong L, Hinzmann B,

WPI; 2004-653386/63.

New nucleic acids, and encoded proteins, from prostatic cancer tissue, useful for diagnosis, treatment and in screening for specific binding agents.

Claim 2; Page 1545; 1607pp; German.

gubstances involves a binding assay, any compounds that bind are selected, optionally after deconvolution of mixtures. Detection of a predetermined minimum level of the reporter indicates the presence of tumour cells. Inhibitors can be chosen from antisense oligonucleotides, short-interfering RNA or ribozymes; an organic molecule of molecular weight below S000, preferably 300, that binds to the polypeptide; an aptamer against the polypeptide; a (monoclonal) antibody (Ab) against the polypeptide; an anti-idiotype, non-human (monoclonal) antibody directed against Ab or any of the above derivatised with a reporter group, cell toxin, immunostimulatory molecules and/or radioisotope. The polymucleotides are identified in human prostatic cancer by differential expression analysis, using DNA microarrays, between normal and tumorous tissues, with (over) expression being detected by quantitative PCR. Analysis of prostatic cancer samples showed that CD24 was upregulated in many of them. Sections of tissue, isolated from prostatic cancer patients, or subjects at risk, were incubated from prostatic cancer patients, or subjects at risk, were incubated sequentially with anti-human CD4 murine monoclonal antibodies; biotinylated second antibody; streptavidin-conjugated horseradish peroxidase and then diaminobenzidine as colour former (brown). The samples were counterstained with hemalum (blue). Malignant cells stained attrongly but non-malignant cells only weakly. In 15 of 63 samples of adenocarcinoma, membrane and cytoplasmic staining was very strong and lymph node metastases were also stained. ADR65805-ADR66954 represent the sequences which can be used in a method for diagnosing prostatic cancer or the risk of developing prostatic cancer. Diagnosis is based on determining over transcription or over expression of the sequences in prostatic tissue. Screening for inhibitors of the sequences or detection This invention describes novel cytostatic polynucleotide and polypeptide

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polynucleotide and polypeptide sequences used in the method of the invention.
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Sequence 214 AA;

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         GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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Sequence 10,
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                                                                                                                                                                                                                                                                                        Sequence
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APPLICANT: Mitcham, Jennifer L.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan Louise
APPLICANT: Harlocker, Susan Louise
APPLICANT: Harlocker, Steven G.
APPLICANT: Face, Michael
APPLICANT: Ranger, Gary
APPLICANT: Reter, Mark
APPLICANT: Solk, John
APPLICANT: Pany Canig
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
TITLE REFERENCE: 210121.427C9
TITLE REFERENCE: 210121.427C9
CURRENT FILING DATE: 1999-11-12
NUMBER OF SEQ ID NOS: 575
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 522
LENGTH: A
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                             US-09-141-908-6
US-09-657-440-5
US-09-683-110-4065
US-09-107-433-3802
US-09-489-039A-13790
US-08-374-155A-5
US-08-374-155A-10
US-08-374-155A-10
US-08-374-155A-10
US-09-204-208A-11
US-10-072-436-11
US-10-072-436-11
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US-09-269-861A-8
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US-09-636-215-522
Sequence 522, Application US/09636215
Fatent No. 6620922
GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan L.
APPLICANT: Jiang, Yuqui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan Louise
APPLICANT: Harlocker, Susan Louise
APPLICANT: Ged, Steven G.
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Patent No. 6329505
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Best Local Similarity 100.0
281
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Length 20;

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APPLICANT:
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APPLICANT: Carter, Darrick
APPLICANT: Mang, Aijun
APPLICANT: Wasir A.W.
APPLICANT: Wasir A.W.
APPLICANT: Hepler, William
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: OF PROSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: OF PROSITIONS OF PROS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Hepler, William
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REPERBLOE: 210121.427C21
CURRENT APPLICATION WHERE: U$/09/685,166A
CURRENT FILING DATE: 2000-10-10
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100.0%; Score 100; DB 4;
Best Local Similarity 100.0%; Pred. No. 2.7e-11;
Matches 20; Conservative 0; Mismatches 0;
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 522
LENGTH: 20
TYPE: PRT
ORGANISM: Artificial Sequence
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Patent No. 6630305
GENERAL INPORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan L.
APPLICANT: Henderson, Robert A.
APPLICANT: Kalos, Michael D.
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; OTHER INFORMATION: Made in a lab
US-09-636-215-522
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US-09-685-166A-522
Henderson, Robert A.
Kalos, Michael D.
                                                                                                                                 Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
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Retter, Marc W.
Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
Li, Samel
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ORGANISM: Artificial Sequence
                                                                             Fanger, Gary R.
Retter, Marc W.
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US-09-685-166A-522
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SEQ ID NO 522
LENGTH: 20
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APPLICANT:
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                                                   Gaps
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CURRENT APPLICATION NUMBER: US/09/679,426
CURRENT FILING DATE: 2000-10-02
NUMBER OF SEQ ID NOS: 895
SEQ ID NO 522
LENGTH: 20
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         Score 100; DB 4;
Pred. No. 2.7e-11;
; Mismatches 0;
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Best Local Similarity 100.0%; Pred. No. 2.7e-11;
Matches 20; Conservative 0; Mismatches 0;
                                                                                                                                                                                                             Sequence 522, Application US/09679426
Patent No. 6759515
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; Sequence 522, Application US/09759143
; Patent No. 6800746
; PRIERAL INFORMATION:
; APPLICANT: Xu, Jiangchun
100.0%; Scor
100.0%; Pre
                                                                                     1 LLVVPAIKKDYGSQEDFTQV 20
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; OTHER INFORMATION: Made in a lab
US-09-679-426-522
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Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
                                                                                                                                                                                                                                                                      Xu, Jiangchun
Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
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Henderson, Robert A.
Kalos, Michael D.
Fanger, Gary R.
Retter, Marc W.
Stolk, John A.
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Henderson, Robert A.
Kalos, Michael D.
Fanger, Gary R.
Retter, Marc W.
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ORGANISM: Artificial Sequence
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Hepler, William
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Vedvick, Thomas S
Carter, Darrick
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Day, Craig H.
Vedvick, Thomas
Carter, Darrick
           Query Match
Best Local Similarity 100.
Matches 20; Conservative
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APPLICANT: Xu, Jian
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APPLICANT:

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APPLICANT: Rosen et al.
TITLE OF INVENTION: 70 Human Secreted Proteins
FILE REFERENCE: PZ001P1
                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/148,545
CURRENT FILING DATE: 1998-09-04
EARLIER FILING DATE: 1998-03-06
EARLIER FILING DATE: 1998-03-06
EARLIER PILING DATE: 1998-03-06
EARLIER FILING DATE: 1997-03-07
EARLIER PILING DATE: 1997-03-07
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APPLICATION NUMBER: 60/040,626
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APPLICATION NUMBER: 60/040,334
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APPLICATION NUMBER: 60/047,615
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APPLICATION NUMBER: 60/047,597
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APPLICATION NUMBER: 60/047,502
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APPLICATION NUMBER: 60/047,633
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APPLICATION NUMBER: 60/047,583
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APPLICATION NUMBER: 60/047,503
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FILING DATE: 1997-05-23
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FILING DATE: 1997-05-23
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APPLICATION NUMBER: 60/038,621
                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/040,161
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APPLICATION NUMBER: 60/047,601
FILING DATE: 1997-05-23
                                                                   Sequence 137, Application US/09148545
Patent No. 6590075
GENERAL INFORMATION:
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APPLICATION NUMBER: 60/
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                                                  JS-09-148-545-137
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                 APPLICANT: Wang, Aijun
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Hepler, William
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REPRENENCE: 21011.427023
CURRENT APPLICATION NUMBER: US/09/759,143
CURRENT FILING DATE: 2001-01-12
NUMBER OF SEQ ID NOS: 934
SOFTWARE: PastSEQ for Windows Version 3.0
LENGTH: 20
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APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Hepler, William
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
CURRENT APPLICATION NUMBER: US/09/651,236
CURRENT FILING DATE: 2000-08-29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match 100.0%; Score 100; DB 4; Length 20; Best Local Similarity 100.0%; Pred. No. 2.7e-11; Matches 20; Conservative 0; Mismatches 0; Indels
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 522
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 522, Application US/09651236 Patent No. 6818751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 LLVVPAIKKDYGSQEDFTQV 20
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ORGANISM: Artificial Sequence
FRATURE:
OTHER INFORMATION: Made in a lab
US-09-759-143-522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: Made in a lab
US-09-651-236-522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Xu, Jiangchun
Dillon, Davin C.
Mitcham, Jennifer L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jiang, Yuqui
Henderson, Robert A.
Kalos, Michael D.
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fanger, Gary R.
Retter, Marc W.
Stolk, John A.
Li, Samuel
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Best Local Similarity
Matches 20; Conserv
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60/047,600

60/047,584 60/047,500

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R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,315
R FILING DATE: 1997-04-11
R FILING DATE: 1997-06-06
R PILING DATE: 1997-06-06
R APPLICATION NUMBER: 60/056,886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,877
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,889
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,893
R FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/043,580
FILING DATE: 1997-04-11
APPLICATION NUMBER: 60/043,568
                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1997-04-11
APPLICATION NUMBER: 60/043,312
FILING DATE: 1997-04-11
APPLICATION NUMBER: 60/043,313
                                                                                                           APPLICATION NUMBER: 60/043,314
FILING DATE: 1997-04-11
APPLICATION NUMBER: 60/043,569
                                                                                                                                                                                        FILING DATE: 1997-04-11
APPLICATION WUMBER: 60/043,311
FILING DATE: 1997-04-11
APPLICATION NUMBER: 60/043,671
                                                                                                                                                                                                                                                                                                    FILING DATE: 1997-04-11
APPLICATION WUMBER: 60/043,674
FILING DATE: 1997-04-11
APPLICATION NUMBER: 60/043,669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,882
FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/056,662
FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,872
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/056,879
FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,880
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FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,864
APPLICATION NUMBER: 60/056,864
APPLICATION NUMBER: 60/056,631
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FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/047,595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1997-04-11
APPLICATION NUMBER: 60/043,672
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FILING DATE: 1997-08-22
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APPLICATION NUMBER: 60/056,903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/056,888
FILING DATE: 1997-08-22
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APPLICATION NUMBER: 60/056,894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/056,911
FILING DATE: 1997-08-22
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FILING DATE: 1997-08-22
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FILING DATE: 1997-08-22
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                                                                                     LING DATE: 1997-04-11
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| BALLIER RAPLICATION NUMBER: 60/057,761
| BALLIER PAPLICATION NUMBER: 60/057,562
| BALLIER PAPLICATION NUMBER: 60/047,566
| BALLIER PAPLICATION NUMBER: 60/047,567
| BALLIER PAPLICATION NUMBER: 60/047,568
| BALLIER PAPLICATION NUMBER: 60/047,569
| BALLIER PAPLICATION NUMBER: 60/047,569
| BALLIER PAPLICATION NUMBER: 60/047,561
| BALLIER PAPLICATION NUMBER: 60/045,662
| BALLIER PAPLICATION NUMBER: 60/045,662
| BALLIER PAPLICATION NUMBER: 60/045,662
| BALLIER PAPLICATION NUMBER: 60/056,895
| BALLIER PAPLICATION NUMBER: 60/056,996
| BALLIER PAPLICATION NUMBER: 60/056,
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GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
TITLE OF INVENTION: COMPUNDS FOR IMMUNOTHERAPY OF PROSTATE CANCER AND METHODS FO
NUMBER OF SEQUENCES: 224
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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0
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APPLICATION NUMBER: US/09/030,607
FILING DATE: 25-FEB-1998
CLASSIFICATION:
ATTONNEY/AGENT INFORMATION:
NAME: MAX!, DAVID J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 210121.427C3
TELECOMMUNICATION INFORMATION:
                                                              ATTORNEY AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 31,392
REFERENCE/DOCKET NUMBER: 210121.427C2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 682-6031
INFORMATION FOR SEQ ID NO: 114:
SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
TYPE: amino acid
STRANDEDMESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
        APPLICATION NUMBER: US/09/020,956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-030-607-114
; Sequence 114, Application US/09030607
; Patent No. 6262245
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COMPUTER READABLE FORM:
MEDIUM TYPE: FIOPPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120 LLVVPAIKKDYGSQEDFTQV 139
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Matches 20; Conservative C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (206) 682-6031
INFORMATION FOR SEQ ID NO: 11.
SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
TYPE: amino acid
STRANDEDNESS: single
                               09-FEB-1998
                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
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                            FILING DATE: 0 CLASSIFICATION:
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ORIGINAL SOURCE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STATE: WA
COUNTRY: U
                                                                                                                                                                                                                                                                                                                                                                                                               US-09-020-956-114
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US-09-030-607-114
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Sequence 114, Application US/09020956
Patent No. 6261562
GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
APPLICANT: Dillin, Davin C.
TITLE OF INVENTION:
CORRESPONDENCE ADDRESS:
ADDRESSEE: SEED and BERRY LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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100.0%; Pred. No. 6e-10;
tive 0; Mismatches 0; Indels
APPLICANT: Goli, Surya
APPLICANT: Zhang, Hong Wolfe
APPLICANT: Zhang, Hong Wolfe
TILE OF INVENTION: NOVEL HUMAN TUMOR-ASSOCIATED ANTIGEN
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSE: Incyte Pharmaceuticals, Inc.
STREET: 3174 Porter Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6e-10;
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: SEED and BERRY LLP
6300 Columbia Center, 701 Fifth Avenue
                                                                                                                                                                                                         ZOUNTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Disketter
COMPUTER: IBM Compatible
CORRATING SYSTEM: DOS
SOFTWARE: PassESG for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/808,148
FILING DATE: Herewith
CLASSIFICATION DATA:
APPLICATION NUMBER:
FILING DATE: FILING DATE:
FILING DATE: FILING DATA:
APPLICATION NUMBER: 36,749
REGISTRATION NUMBER: 36,749
REGISTRATION NUMBER: BF-0218 US
REGISTRATION NUMBER: PF-0218 US
REGISTRATION NUMBER: PF-0218 US
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
IMMEDIATE SOURCE:
LIBRARY: PROSNOT26
CLONE: 2187263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 415-855-0555
TELEFAX: 415-845-4166
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Matches 20; Conservative
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CITY: Seattle
STATE: WA
COUNTRY: USA
ZIP: 981.04
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy di
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                                                                                                                                                    CITY: Pa
STATE: C
COUNTRY:
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120 LLVVPAIKKDYGSQEDFTQV 139
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US-09-159-812-114
                                                                                                                                                                       US-09-232-149A-114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-636-215-114
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Patent No. 6395278

GENERAL INFORMATION:
APPLICANT: Dillon, Davin C.
APPLICANT: Dillon, Davin C.
APPLICANT: Harlocker, Susan Louise
APPLICANT: Midnag, Yuqui
APPLICANT: Xu, Jiangchun
APPLICANT: Micchan, Jennifer Lynn
APPLICANT: Michan, Jennifer Lynn
TITLE OF INVENTION: COMPOUNDS FOR IMMUNOTHERAPY AND DIAGNOSIS
TITLE OF INVENTION: COMPOUNDS FOR IMMUNOTHERAPY
TITLE OF INVENTION: COMPOUNDS FOR IMMUNOTHERAPY
TITLE OF INVENTION: OR PROSTATE CANCER AND METHODS FOR THEIR USE
CURRENT PILING DATE: 1999-07-13
NUMBER OF SEQ ID NOS: 472
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                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan Louise
APPLICANT: Harlocker, Susan Louise
APPLICANT: Ralos, Michael
APPLICANT: Ralos, Michael
APPLICANT: Ralos, Michael
APPLICANT: Retter, Mark
APPLICANT: Retter, Mark
APPLICANT: Solk, John
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFERENCE: 210121427C9
CURRENT APPLICATION NUMBER: US/09/439,313
CURRENT FILING DATE: 1999-11-12
NUMBER OF SEQ ID NOS: 575
SOFTWARE: FastSEQ for Windows Version 3.0
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Query Match 100.0%; Score 100; DB 3; Length 241; Best Local Similarity 100.0%; Pred. No. 6e-10; Matches 20; Conservative 0; Mismatches 0; Indels (
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100.0%; Pred. No. 6e-10;
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                                                                                                                                                                                                                                                              ; Sequence 114, Application US/09439313
; Patent No. 6329505
                                                                                                                                 120 LLVVPAIKKDYGSQEDFTQV 139
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Best Local Similarity 100.
Matches 20; Conservative
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ORGANISM: Homo sapien
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CORGANISM: Homo sapien
US-09-352-616A-114
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Matches 20; Conserv
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US-09-352-616A-114
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US-09-439-313-114
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LENGTH: 241
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Patent No. 6613872

GRERAL INFORMATION:
APPLICANT: NJ. Jiangchun
TITLE OF INVENTION: COMPOUNDS FOR IMMUNOTHERAPY OF
TITLE OF INVENTION: COMPOUNDS FOR IMMUNOTHERAPY OF
TITLE OF INVENTION: TOOSTATE CANCER AND METHODS FOR THEIR USE
FILE REFERENCE: 210121.428C5
CURRENT PILING DATE: 1998-09-23
NUMBER OF SEQ ID NOS: 306
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 114
LENGTH: 241
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Sequence 114, Application US/09232149A
; Sequence 114, Application US/09232149A
; Patent No. 6465611
; GENERAL INFORMATION:
    APPLICANT: NIFORMATION:
    APPLICANT: Dillon, Davin C.
    APPLICANT: Davin C.
    APPLICANT: Davin C.
    APPLICANT: Davin C.
    APPLICANT: Davin C.
    AP
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Best Local Similarity 100.0%; Pred. No. 6e-10;
Matches 20; Conservative 0; Mismatches 0; Indels
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                           APPLICANT: Harlocker, Susan L.
APPLICANT: Harlocker, Susan L.
APPLICANT: Henderson, Robert A.
APPLICANT: Henderson, Robert A.
APPLICANT: Henderson, Robert A.
APPLICANT: Fanger, Gary R.
APPLICANT: Fanger, Gary R.
APPLICANT: Seclk, John A.
APPLICANT: Odvick, Thomas S.
APPLICANT: Odvick, Thomas S.
APPLICANT: Wang, Aljun
APPLICANT: Aljun
APPLICANT
APPL
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Harlocker, Susan L.
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Search completed: February 5, 2005; 20:07:12 Job time : 34.4237 secs

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February 5, 2005, 20:00:18; Search time 74.9153 Seconds (without alignments) 86.952 Million cell updates/sec
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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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Maximum DB seq length: 200000000
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Sequence:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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		3-09-759-143-522	3-09-780-669-522	3-09-822-827-522	3-09-895-793-522	3-09-895-814-522	JS-10-012-896-522	JS-10-010-940-522	JS-10-144-678A-522	JS-10-294-025-522	JS-09-978-360A-555	3-09-981-876-137	JS-09-148-545-137	US-10-264-237-1489
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Sequence 114, App	Sequence 114, App	Sequence 114, App	114	114	114	44,	114	114	E :	ñ	Ξ	4	Sequence 114, App	Ξ	6	7	7	Ξ	32	42	8	43,	v	76	Seguence 22, Appl	က	195	Sequence 48, Appl	275	Sequence 59382, A	Sequence 1342, Ap
Seg	Seg	Seg	Seg	Seg	Seg	Seg	Seg	Seg	Se	Sec	Sec	Sec	Sec	Sec	Sec	Sec	Sec	Sec	Sec	Sec	Sec	Sed.	Sec	Sec	Sec	Sec	Sec	Sec	Sec	Sec	Sec
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	241																											102	206	8	103
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	84.0	84.0	84.0	84.0	62.0	47.0	46.0	46.0	45.0	45.0
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## ALIGNMENTS

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APPLICANT: Stolk, John A.
APPLICANT: Stolk, John A.
APPLICANT: Day, Craig H.
APPLICANT: Carter, Darrick
APPLICANT: Carter, Darrick
APPLICANT: Carter, Darrick
APPLICANT: Wang, Aljun
APPLICANT: Heplat, William
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFERENCE: 210121.427C23
CURRENT APPLICATION NUMBER: US/09/759,143
CURRENT APPLICATION NUMBER: US/09/759,143
CURRENT FILING DATE: 2001-01-12
NUMBER OF SEQ ID NOS: 934
SOFTWARE: FastSEQ for Windows Version 3.0
LENGTH: 20
Sequence 522, Application US/09759143
Patent No. US2002002248A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
FATURE:
OTHER INFORMATION: Made in a lab
US-09-759-143-522
                                                                  Xu, Jiangchun
Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
                                                                                                                                                    Jiang, Yuqui
Henderson, Robert A.
Kalos, Michael D.
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Retter, Marc W.
Stolk, John A.
                                                                                   APPLICANT:
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APPLICANT:
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Gaps

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Indels

Length 20;

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Query Match
100.0%; Score 100; DB 9;
Best Local Similarity 100.0%; Pred. No. 5.6e-10;
Matches 20; Conservative 0; Mismatches 0;
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                                                                       CTHER INFORMATION: Made in a lab US-09-822-827-522
                TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
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Best Local Similarity
Matches 20; Conservat
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APPLICANT:
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LENGIH:
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APPLICANT: Hural, John
APPLICANT: McNeill, Patricia D.
APPLICANT: Houghton, Raymond L.
AITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFERENCE: 210121.427C24
CURRENT APPLICATION NUMBER: US/09/780,669
CURRENT FILING DATE: 2001-02-09
NUMBER OF SEQ ID NOS: 943
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Patent No. US20020081680A1

GENERAL INFORMATION:
APPLICANT: XU, Jiangchun

APPLICANT: XU, Jiangchun

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND

TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER

FILE REFERENCE: 210121.5348

CURRENT APPLICATION VUMBER: US/09/822,827

CURRENT FILING DATE: 2001-03-28

NUMBER OF SEQ ID NOS: 982

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 522
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                    Length 20;
                                                         Indels
                Query Match
100.0%; Score 100; DB 9;
Best Local Similarity 100.0%; Pred. No. 5.6e-10;
Matches 20; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                     ; Sequence 522, Application US/09780669; Patent No. US20020051977A1; GENERAL INFORMATION:
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Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
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US-09-780-669-522
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Henderson, Robert A.
Kalos, Michael D.
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Retter, Marc W.
Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
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ORGANISM: Artificial Sequence
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Skeiky, Yasir A.W.
Hepler, William
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Best Local Similarity 100.
Matches 20, Conservative
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APPLICANT:
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APPLICANT: FOY, Teresa

ATILE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: COMPOSITIONS OF PROSITIE CANCER

FILE REPRESENCE: 210121:53402

CURRENT APPLICATION NUMBER: US/09/895,793

CURRENT FILING DATE: 2001-06-29

NUMBER OF SEQ ID NOS: 982

SOFTWARE: FastSEQ for Windows Version 3.0

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ilarity 100.0%; Pred. No. 5.6e-10;
Conservative 0; Mismatches 0;
Sequence 522, Application US/09895793; Publication No. US20020192763A1; GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun APPLICANT: Mitcham, Jennifer L.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Mitcham, Jennifer L.
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McNeill, Patricia D.
Houghton, Raymond L.
Vinals de Bassols, Carlota
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US-09-895-793-522
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Hepler, William T.
Henderson, Robert A.
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Kalos, Michael D.
Retter, Marc W.
Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
Li, Samuel X.
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Gaps

APPLICANT APPLICANT

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APPLICANT: Meagher, Madeleine Joy
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFERENCE: 210121.427C27
CURRENT APPLICATION NUMBER: US/10/012,896
CURRENT FILING DATE: 2001-12-10
NUMBER OF SEQ ID NOS: 1011
SEQ ID NO 5.22
LENGTH: 20
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APPLICANT: Reed, Steven G.
APPLICANT: Reed, Steven G.
APPLICANT: Red, Michael
APPLICANT: Reter, Mark
APPLICANT: Retter, Mark
APPLICANT: Bay, Craig
JITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFERENCE: 210121.42703
CURRENT FILING DATE: 2001-12-05
NUMBER OF SEQ ID NOS: 575
SOFTWARE: PastSEQ for Windows Version 3.0
LENGTH: 20
LENGTH: 20
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Best Local Similarity 100.0%; Pred. No. 5.6e-10;
Matches 20; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 522, Application US/10010940 Publication No. US20030088062A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan Louise
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US-10-012-896-522
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US-10-010-940-522
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ORGANISM: Artificial Sequence
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ORGANISM: Artificial Sequence
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Best Local Similarity 100.8
Matches 20; Conservative
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APPLICANT: Fanger, Gary R.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSITE CANCER
FILE REPERENCE: 210121.427026
CURRENT APPLICATION NUMBER: US/09/895,814
CURRENT APPLICATION NUMBER: 2001-06-29
NUMBER OF SEQ ID NOS: 990
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 522
LENGTH: 20
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Houghton, Raymond L.
Vinals de Bassols, Carlota
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Houghton, Raymond L.
Vinals de Bassols, Carlota
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Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Sugan L.
Jiang, Yugiu
Kalos, Michael D.
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                                                                                                                                                                                                                                                      Skeiky, Yasir A.W.
Hepler, William T.
Henderson, Robert A.
Hural, John
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Fanger, Gary R.
Wantanabe, Yoshihiro
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Hepler, William T.
Henderson, Robert A.
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Vedvick, Thomas S.
Carter, Darrick
Li, Samuel X.
                                                                                                           Retter, Marc W.
Stolk, John A.
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Matches 20; Conservative
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US-09-978-360A-555
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Publication No. US20030185830A1

GENERAL INFORMATION:

GENERAL INFORMATION:

APPLICANT: Xu, Jiangchun A.

APPLICANT: Kalos, Michael D.

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: DIAMNOSIS OF PROSTATE CANCER

FILE REFERENCE: 210121.427C29

CURRENT APPLICATION NUMBER: US/10/294,025

CURRENT PILIOR DATE: 2002.11-12

NUMBER OF SEQ ID NOS: 1038

SOGTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 522
                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Deng, Ta
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFERENCE: 210121.437C28
CURRENT FILING DATE: 2002-08-12
NUMBER OF SEQ ID NOS: 1033
SOFTWARE: FastSEQ for Windows Version 3.0
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Best Local Similarity 100.0%; Pred. No. 5.6e-10;
Matches 20; Conservative 0; Mismatches 0; Indels C
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                                                                                                                                                                                                                                                                                   MCNeill, Patricia D.
Houghton, Raymond L.
Vinale y de Bassols, Carlota
Foy, Teresa M.
Watanabe, Yoshihiro
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US-10-144-678A-522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Made in a lab
                         Jiang, Yuqiu
Henderson, Robert A.
Kalos, Michael D.
       Harlocker, Susan L.
                                                                                                                  Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
                                                                                                                                                                                                                               Skeiky, Yasır A. W.
Hepler, William T.
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ORGANISM: Artificial Sequence
                                                                                 Fanger, Gary R. Retter, Marc W.
                                                                                                                                                                                              , Samuel X.
                                                                                                                                                                                                                   Wang, Aijun
                                                                                                                                                                                                                                                                           John
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US-10-294-025-522
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LENGTH: 20
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APPLICANT: Duclett, Aymeric Demonstrates, Loydie
APPLICANT: Duclett, Aymeric Demonstrates, Lydie
APPLICANT: Oboert, Severin
APPLICANT: Glusel, Catherine
TITLE DO INVARYNION: Complementary DNA's Encoding Proteins with Signal Peptides
FILE REPERENCE: 56.U34.CIP
CURRENT APPLICATION NUMBER: US/00/978,360A
CURRENT FILING DATE: 1997-11-3
PRIOR APPLICATION NUMBER: US 60/066,677
PRIOR PLING DATE: 1997-12-17
PRIOR APPLICATION NUMBER: US 60/094,121
PRIOR PLING DATE: 1998-02-13
PRIOR APPLICATION NUMBER: US 60/096,116
PRIOR PLING DATE: 1998-04-13
PRIOR PLING DATE: 1998-04-13
PRIOR PLING DATE: 1998-04-13
PRIOR PLING DATE: 1998-11-13
PRIOR PLING DATE: 1998-11-13
PRIOR APPLICATION NUMBER: US 60/096,116
PRIOR PLING DATE: 1998-11-13
PRIOR PLING DATE: 1998-11-13
PRIOR PLING DATE: 1998-11-13
PRIOR PLING DATE: 1998-11-13
PRIOR PLING DATE: 1999-12-19
PRIOR PLING DATE: 1999-13-19
PRIOR PLING DAT
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Fatent No. US20020164669A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE REFERENCE: PZ001P1
CURRENT APPLICATION NUMBER: US/09/981,876
CURRENT FILING DATE: 2001-10-19
FRIOR APPLICATION NUMBER: 09/148,545
FRIOR PILING DATE: 1998-09-04
FRIOR FILING DATE: 1997-03-07
Sequence 555, Application US/09978360A Publication No. US20040110939A1 GENERAL INFORMATION: Dear-Baptiste Dumas Milne Applicant: Edwards, Jean-Baptiste Dumas Milne
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Gaps

NUMBER: 60/040,333 1997-03-07 NUMBER: 60/038,621 1997-03-07 NUMBER: 60/040,161 1997-03-07 NUMBER: 60/040,334 1997-03-07 NUMBER: 60/040,336 1997-03-07 NUMBER: 60/040,316 1997-03-07 NUMBER: 60/040,316 1997-03-07 NUMBER: 60/040,163	1 1997-05-23  NUMBER: 60/047,600  1997-05-23  NUMBER: 60/047,597  1997-05-23  NUMBER: 60/047,633  1997-05-23  NUMBER: 60/047,633  1997-05-23  NUMBER: 60/047,613  1997-05-23  NUMBER: 60/047,618  1997-05-23  NUMBER: 60/047,518  1997-05-23  NUMBER: 60/047,503  1997-05-23  NUMBER: 60/047,503  1997-05-23  NUMBER: 60/047,581  1997-05-23  NUMBER: 60/047,584  1997-05-23  NUMBER: 60/047,584  1997-05-23  NUMBER: 60/047,584  1997-05-23  NUMBER: 60/047,587  NUMBER: 60/047,587	7-05-23 ER: 60/047,61 ER: 60/047,58 ER: 60/047,59 ER: 60/047,59 ER: 60/047,61 7-05-23 ER: 60/047,63 ER: 60/047,63 ER: 60/043,63 ER: 60/043,58 ER: 60/043,56 ER: 60/043,56 ER: 60/043,56 ER: 60/043,57 7-04-11 ER: 60/043,67 ER: 60/043,67 ER: 60/043,67 ER: 60/043,67 ER: 60/043,67 ER: 60/043,67 ER: 60/043,67 ER: 60/043,67 ER: 60/043,67 ER: 60/043,67
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PRIOR PELICATION NUMBER: 60/043, 313
PRIOR FILING DATE: 1997-04-11
PRIOR PELICATION NUMBER: 60/043, 313
PRIOR PELICATION NUMBER: 60/043, 572
PRIOR PELING DATE: 1997-04-11
PRIOR APPLICATION NUMBER: 60/046, 974
PRIOR PELING DATE: 1997-04-11
PRIOR PELING DATE: 1997-04-11
PRIOR PELING DATE: 1997-04-11
PRIOR PELING DATE: 1997-06-06
PRIOR PELING DATE: 1997-06-06
PRIOR PELING DATE: 1997-06-22
PRIOR P

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REFLING DATE: 1997-05-23

REPLING DATE: 1997-05-33

REPLING DATE: 1997-05-33

REPLING DATE: 1997-04-11

REPLING DATE: 1997-04-11
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R APPLICATION NUMBER: 60/047,633

R FILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,583

R FILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,617

R ILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,618

R PILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,503

R R FILING DATE: 1997-05-23

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R APPLICATION NUMBER: 60/047,584

R PILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,500

R PILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,587

R FILING DATE: 1997-05-23

R PILING DATE: 1997-05-23

R PILING DATE: 1997-05-23

R PILING DATE: 1997-05-23

R PILING DATE: 1997-05-23
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R APPLICATION NUMBER: 60/040,163
R FILING DATE: 1997-03-07
R APPLICATION NUMBER: 60/047,615
R FILING DATE: 1997-05-23
R APPLICATION NUMBER: 60/047,600
R FILING DATE: 1997-05-23
R APPLICATION NUMBER: 60/047,597
R FILING DATE: 1997-05-23
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FILING DATE: 1997-04-11
APPLICATION NUMBER: 60/043,672
FILING DATE: 1997-04-11
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APPLICATION NUMBER: 60/047,581
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APPLICATION NUMBER: 60/047,613
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100.0%; Score 100; DB 9;
Best Local Similarity 100.0%; Pred. No. 9.6e-09;
Matches 20; Conservative 0; Mismatches 0;
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Dis-U9-148-545-13/
Publication No. US20030027132A1
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION:
TITLE OF INVENTION: 70 Human Secreted Proteins
FILE REPERBNCE: PZ001P1
CURRENT APPLICATION NUMBER: US/09/148,545
CURRENT FILING DATE: 1998-09-04
EARLIER APPLICATION NUMBER: PCT/US98/04482
EARLIER APPLICATION NUMBER: 60/040,162
EARLIER APPLICATION NUMBER: 60/040,163
EARLIER FILING DATE: 1997-03-07
PRIOR APPLICATION NUMBER: 60/047,589
PRIOR FILING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: 60/047,593
PRIOR APPLICATION NUMBER: 60/047,614
PRIOR APPLICATION NUMBER: 60/043,578
PRIOR APPLICATION NUMBER: 60/043,578
PRIOR APPLICATION NUMBER: 60/043,578
PRIOR FILING DATE: 1997-04-11
PRIOR FILING DATE: 1997-04-11
PRIOR PRILING DATE: 1997-04-11
PRIOR PRILING DATE: 1997-04-12
PRIOR APPLICATION NUMBER: 60/043,670
PRIOR PELING DATE: 1997-06-22
PRIOR APPLICATION NUMBER: 60/056,644
PRIOR FILING DATE: 1997-08-22
PRIOR PELING DATE: 1997-08-22
PRIOR PE
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R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/048,974
R FILING DATE: 1997-06-06
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,886
R FILING DATE: 1997-08-22
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,893
R FILING DATE: 1997-08-22
R RAPLICATION NUMBER: 60/056,893
R FILING DATE: 1997-08-22
ER APPLICATION NUMBER: 60/056,830
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,830
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,878
ER RELING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,878
ER RELING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,888

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,879

R PILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,880

R PILING DATE: 1997-08-22
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A APPLICATION NUMBER: 60/056,874

R FILING DATE: 1997-08-22

A PPLICATION NUMBER: 60/056,910

R FILING DATE: 1997-08-22

A APPLICATION NUMBER: 60/056,864

R FILING DATE: 1997-08-22
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R PILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,892
R PILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/047,595
R PILING DATE: 1997-05-23
R APPLICATION NUMBER: 60/057,761
APPLICATION NUMBER: 60/043,315
                                                                                                                                                                                                                                                                                                                    FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,872
                                                                                                                                                                                                                                                                                                                                                           PILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,882
FILING DATE: 1997-08-22
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APPLICATION NUMBER: 60/056,903
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FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,636
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APPLICATION UNMBER: 60/647,599
FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,588
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APPLICATION WUMBER: 60/047,585
FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,586
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APPLICATION NUMBER: 60/047,590
FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,594
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APPLICATION NUMBER: 60/043,578
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FILING DATE: 1997-08-22
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PILING DATE: 1997-08-22
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Publication No. US20040009491A1

GENERAL INFORMATION:

TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies

FILE REFERENCE: PA131P1

CURRENT FILING DATE: 2002-10-04

PRIOR APPLICATION NUMBER: PCT/US01/16450

PRIOR APPLICATION NUMBER: PCT/US01/16450

PRIOR APPLICATION NUMBER: D67/0501/16450

PRIOR APPLICATION NUMBER: US 60/205,515

PRIOR APPLICATION NUMBER: US 60/205,515

SPRIOR PILING DATE: 2000-05-19

NUMBER OF SEQ ID NOS: 2876

SOFTWARE: PATENTIN Ver. 3.1

SEQ ID NO 1489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 233;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
EARLIER APPLICATION NUMBER: 60/047,501
EARLIER FILING DATE: 1997-05-23
EARLIER FILING DATE: 1997-06-23
EARLIER FILING DATE: 1997-06-11
EARLIER FILING DATE: 1997-06-63
EARLIER APPLICATION NUMBER: 60/056,632
EARLIER APPLICATION NUMBER: 60/056,64
EARLIER APPLICATION NUMBER: 60/056,896
EARLIER FILING DATE: 1997-08-22
EARLIER FILING DATE: 1997-08-22
EARLIER APPLICATION NUMBER: 60/056,891
EARLIER APPLICATION NUMBER: 60/056,892
EARLIER APPLICATION NUMBER: 60/056,909
EARLIER APPLICATION NUMBER: 60/056,909
EARLIER FILING DATE: 1997-08-22
EARLIER APPLICATION NUMBER: 60/056,807
EARLIER FILING DATE: 1997-08-22
EARLIER APPLICATION NUMBER: 60/056,908
EARLIER APPLICATION NUMBER: 60/056,908
EARLIER APPLICATION NUMBER: 60/056,908
EARLIER FILING DATE: 1997-09-05
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Matches 20; Conservative
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; ORGANISM: Homo sapiens
US-10-264-237-1489
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119 LLVVPAIKKDYGSQEDFTQV 138

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APPLICANT: Skelky, Yasir A.W.
APPLICANT: Skelky, Yasir A.W.
APPLICANT: Hepler, William
ITILE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
ITILE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REPERENCE: 210121.427C23
CURRENT APPLICATION NUMBER: US/09/759,143
CURRENT FILING DATE: 2001-01-12
NUMBER OF SEQ ID NOS: 934
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 114
LENGTH: 241
ITYPE: PRT
TYPE: RATE OF MINDOWS VARION 3.0
SEQ ID NO 114
CENTRE OF INVENTION OF SEQ ID NOS: 934
SEQ ID NO 114
CENTRE OF INVENTION OF SEQ ID NOS: 934
CORRENTED FASTS OF WINDOWS VARION 3.0
SEQ ID NO 114
CENTRE OF INVENTION OF SEQ ID NOS: 934
CENTRE OF INVENTION OF SEQ ID NOS: 934
CONTRACT FASTS OF 
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McNeill, Raymond L.
FUNTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
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; Sequence 114, Application US/09759143; Patent No. US20020022248A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120 LLVVPAIKKDÝGSQEDFTOV 139
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                                                                                                                 Xu. Jiangchun
Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
Jiang, Yuqui
Henderson, Robert A.
Kalos, Michael D.
Fanger, Gary R.
Fetter, Marc W.
Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
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Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
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Henderson, Robert A.
Kalos, Michael D.
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Skeiky, Yasir A.W.
Hepler, William
Hural, John
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Vedvick, Thomas S.
Carter, Darrick
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Best Local Similarity 100.
Matches 20; Conservative
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Retter, Marc W.
Stolk, John A.
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TITLE OF INVENTION:
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GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
              Copyright
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- protein search, using sw model OM protein 5, 2005, 19:49:45; Search time 19.661 Seconds (without alignments) 97.876 Million cell updates/sec February Run on:

US-09-780-669-114\_COPY\_120\_139 Title: Perfect score:

1 LLVVPAIKKDYGSQEDFTQV 20 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 seqs, 96216763 residues Searched:

283416 Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 200000000 8 8 8 Minimum Maximum Maximu

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 su

summaries

PIR 79:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\*

Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		di			SUMMARIES	
Result No.	Score	Query Match	Query Match Length	DB	ID	Description
-	100	100.0	241	. ~	A59262	tetraspan TSPAN-1
7	49	49.0	347	0	AC2456	
m	49	49.0	764	7	B82303	conserved hypothet
4	47	47.0	89	~	AG0002	
Ŋ	47	47.0	172	~	C81726	
9	46	46.0	303	~	AC1087	PTS system mannose
7	45	45.0	268	7	S17446	photosystem II oxy
80	45	45.0	521	7	D88640	protein F55A8.2 [i
6	45	45.0	1274	~	T37193	enamelin matrix pr
10	44.5		248	7	S03888	photosystem II oxy
11	44.5	44.5	260	~	S10016	photosystem II oxy
12	44.5	44.5	263	N	JC5271	- 0
13	44.5	44.5	267	~	800005	photosystem II oxy
14	44	44.0	85	~	H82371	conserved hypothet
15	44	44.0	402	٦	E70302	molybdenum cofacto
16	4	•	106	~	C71929	hypothetical prote
17	•	٠	272	N	D95038	н
18	43.5	43.5	272	N	G97908	hypothetical prote
19	43		88	~	A46411	
20	43	43.0	89	0	E91226	hypothetical prote
21	43	43.0	89	N	C86073	
22	43	43.0	89	~	S40804	
23	43	43.0	144	~	S23661	superoxide dismuta
24	43	43.0	222	7	DSRTN	
25	43	43.0	222	N	157023	superoxide dismuta
56	43	43.0	303	N	AB1451	PTS system mannose
27	43	43.0	545	N	A87136	hypothetical prote
28	43	43.0	1062	ß	846367	protein kinase CDC
59	42.5	42.5	258	7	S22763	photosystem II oxy

conserved hypothet	hypothetical prote	thioesterase II (E	phosphotransferase	PTS system, mannos	alcohol dehydrogen	trehalose-6-phosph	hypothetical_prote	hypothetical prote	photosystem II oxy	hypothetical prote	conserved hypothet	superoxide dismuta	superoxide dismuta	superoxide dismuta	superoxide dismuta
F89955	F86697	T17413	C97904	C95033	A46409	C82263	T39684	G84712	F2TOX2	T04506	AD0951	B97797	E64568	S48832	S48831
~	7	~	N	~	٦	~	N	~	-	~	7	7	~	~	0
256	257	281	303	303	360	562	612	257	258	596	89	209	213	223	223
42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	41.5	41.5	41.5	41.0	41.0	41.0	41.0	41.0
		N	2	42	42	42	42	41.5	41.5	41.5	41	41	41	41	41
42	42	4	•	-				4	4	4					

## ALIGNMENTS

- human tetraspan TSPAN-1

C;Species: Homo sapiens (man)
C;Date: 19-May-2000 #sequence\_revision 19-May-2000 #text\_change 09-Jul-2004
C;Datession: A59262
R;Todd, S.C.; Doctor, V.S.; Levy, S.
Biochim. Blophys. Acta 1399, 101-104, 1998
A;Title: Sequences and expression of six new members of the tetraspanin/TM4SF family.
A;Reference number: A59258; MUID:98390278; PMID:9714763

A;Status: preliminary, not compared with conceptual translation A;Molecule type: mRNA A;Residues: 1-241 <TOD>

A;Cross-references: UNIPROT:060635; GB:AF054838; NID:g2997740; PIDN:AAC69714.1; PID:g299 C;Genetics:

A;Gene: TSPAN-1 C;Superfamily: CD9 antigen

Gaps ö Query Match 100.0%; Score 100; DB 2; Length 241; Best Local Similarity 100.0%; Pred. No. 8.5e-09; Matches 20; Conservative 0; Mismatches 0; Indels (

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LLVVPAIKKDYGSQEDFTQV 139 1 LLVVPAIKKDYGSQEDFTQV 20 120 g ò

hypothetical protein alr5203 [imported] - Nostoc sp. (strain PCC 7120)
C;Species: Nostoc sp. PCC 7120
A;Note: Nostoc sp. errain PCC 7120 is a synonym of Anabaena sp. strain PCC 7120
C;Date: 14-Dec-2001 #sequence\_revision 14-Dec-2001 #text\_change 09-Jul-2004
C;Accession: AC2456
R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, A.; Iriguchi Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, S DNA Res. 8, 205-213, 2001
A;Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Ana; A;Reference number: AB1807; MUID:21595285; PMID:11759840

A;Accession: AC2456
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-347 <KUR>

A;Cross-references: UNIPROT:Q8YLU3; GB:BA000019; PIDN:BAB76902.1; PID:g17134342; GSPDB:G.A;Experimental source: strain PCC 7120

C,Genetics: A,Gene: alr5203

Gaps ö Length 347; 5; Indels Score 49; DB 2; Pred. No. 3.3; 4; Mismatches 5 Query Match
Best Local Similarity 52.6%;
Matches 10; Conservative

Gaps

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**Siglaser, P.; Frangeul, L.; Buchrieser, C.; Amend, A.; Baquero, F.; Berche, P.; Bloecker, F.; Jonainguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussurget, O.; Entian, K.D.; Fsihi, H.; D.; Jones, L.M.; Karset, U. Science 294, 849-852, 2001
A;Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, E.; Maitournam, A.; Matok, C.; Schiuteter, T.; Simose, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Wehland, A;Title: Comparative genomics of Listeria species.
A;Reference number: AB1077; MUID:21537279; PMID:11679669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  photosystem II oxygen-evolving complex protein 2 precursor - common tobacco photosystem II oxygen-evolving complex 23K protein N.Alternate names: photosystem II oxygen-evolving complex 23K protein Cispecies: Nicotiana tabacum (common tobacco) C;becies: Nicotiana tabacum (common tobacco) C;bate: 30-Jun-1992 #sequence revision 10-Oct-1997 #text change 09-Jul-2004 C;Accession: S1746; S14445; S44002; S44030; S14993; S14994; S14995; S20936; S2022; R;Hua, S; Dube, S.K.; Barnett, N.M.; Kung, S.D. Plant Mol. Biol. 17, 551-553, 1991 Plant Mol. Biol. 17, 551-553, 1991 A;Title: Nucleotide sequence of gene cee2-A and its cDNA encoding 23 kDa polypeptide of the A;Reference number: S17445; MUID:91355952; PMID:1884009
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, C.; Dodson, R.; Gwinn, M.; Nelson, W.; DeBoy, R.; Kolonay, J.; McClarty, G.; Salzberg, Nucleic Acids Res. 28, 1397-1406, 2000
A;Title: Genome sequences of Chlamydia trachomatis MoPn and Chlamydia pneumoniae AR39.
A;Réference number: A81500, MUID:20150255; PMID:10684935
A;Ratus: Osl726
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-172 <TET>
A;Cross-references: UNIPROT:Q9PL73; GB:AE002290; GB:AE002160; NID:g7190267; PIDN:AAF39106
C;Genetics:
C;Genetics:
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A;Cross-references: UNIRROT:QBYAMO; GB:NC_003210; PIDN:CAC98313.1; PID:g16409457; GSPDB:C
A;Experimental source: strain EGD-e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PTS system mannose-specific, factor IID homolog lmo0098 [imported] - Listeria monocytoger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Gene: 1mo0098
C;Superfamily: phosphotransferase system mannose-specific enzyme II, factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Species: Listeria monocytogenes
Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 09-Jul-2004; Accession: AC1087
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 47; DB 2; Length 172;
Pred. No. 3.3;
6; Mismatches 4; Indels
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Pred. No. 8.9;
5; Mismatches
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79 LLYVPSLEKKQGSDDEYT 96
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Best Local Similarity 44.4%;
Matches 8; Conservative
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Similarity 52.9%;
9; Conservative
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Best Local Similarity
Matches 9; Conserva
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A;Residues: 8-268 <HUA>
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                                                                                                                                                                                                                                                                                                                                                                   C; Species: Wibrio cholerae
C; Species: Vibrio cholerae
C; Species: Vibrio cholerae
C; Species: Vibrio cholerae
C; Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 09-Jul-2004
C; Accession: B82303
R; Heidelberg, J.F.; Eisen, J.A.; Nelson, W.C.; Clayton, R.A.; Gwinn, M.L.; Dodson, R.J.; chardson, D.; Ermolaeva, M.D.; Vamathevan, J.; Bass, S.; Qin, H.; Dragoi, I.; Sellers, F. I. R.R.; Mekalanos, J.J.; Venter, J.C.; Fraser, C.M.
Nature 406, 477-483, 2000
A; Title: DNA Sequence of both chromosomes of the cholera pathogen Vibrio cholerae.
A; Reference number: A82035; MUD: 20406833; PMID: 10952301
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C,Genetics:
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C;Species: Yersinia pestis
C;Date: O2.Nov-2001 #sequence_revision 02-Nov-2001 #text_change 09-Jul-2004
C;Accession: AG0002
R;Parkhill, J; Wren, B.W.; Thomson, N.R.; Titball, R.W.; Holden, M.T.G.; Prentice, M.B. deno-Tarraga, A.M.; Chillingworth, T.; Cronin, A.; Davies, R.M.; Davis, P.; Dougan, G.; Il, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.; Whitehead, S.; Barrell, Nature 413, 523-527, 2001
A;Title: Genome sequence of Yersinia pestis, the causative agent of plague.
A;Fitle: AG0002
A;Accession: A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A,Cross-references: UNIPROT:Q9KUB9; GB:AE004145; GB:AE003852; NID:g9655032; PIDN:AAF9377
A,Experimental source: serogroup O1; strain N16961; biotype El Tor
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81726

conserved hypothetical protein TC0235 [imported] - Chlamydia muridarum (strain Nigg)

C;Species: Chlamydia muridarum, Chlamydia trachomatis MoPn

C;Date: 31-Kar-2000 #sequence_revision 31-Mar-2000 #text_change 09-Jul-2004

C;Accession: C81726

R;Read, T.D.; Brunham, R.C.; Shen, C.; Gill, S.R.; Heidelberg, J.F.; White, O.; Hickey,
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conserved hypothetical protein YPO0013a [imported] - Yersinia pestis (strain CO92)
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Pred. No. 1.7;
3; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 49; DB 2;
Pred. No. 7.6;
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                                                                                                                                                              329 LELPIIKKEISSVKEFTQV 347
                                                                                                                    2 LVVPAIKKDYGSQEDFTQV 20
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Best Local Similarity
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A;Gene: VC0603
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Gaps

Indels

Length 303;

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protein FS5A8.2 [imported] - Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: Caenorhabditis elegans
C;Species: 10-May-2001 #sequence_revision 10-May-2001 #text_change 17-May-2002
C;Accession: D868.0
B;anonymous, The C. elegans Sequencing Consortium.
Science 282, 2012-2018, 1998
A;Title: Genome sequence of the nematode C. elegans: a platform for investigating biolog A;Reference number: A75000; MUID:99069613; PMID:9851916
A;Note: see websites genome wustl.edu/gsc/C_elegans/ and www_sanger.ac.uk/Projects/C_ele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         enamelin matrix protein - mouse
C;Species: Mus musculus (house mouse)
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
C;Accession: T37193
R;Hu, C.C.; Simmer, J.P.; Bartlett, J.D.; Nanci, A.; Qian, Q.; Zhang, C.; Ryu, O.H.; Xue
Bubmitted to the EMBL Data Library, December 1996
A;Description: Cloning and characterization of mouse enamelin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A,Molecule type: mRNA
A,Residues: 1-1274 <HUC>
A;Cross-references: UNIFROT:055196; EMBL:U82698; NID:g2737960; PID:g2737961; PIDN:AAB943
A;Experimental source: strain Swiss-Webster; enamel organ epithelia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEBS Lett. 246, 140-144, 1989
Aritle: The 23 kDa polypeptide of the photosynthetic oxygen-evolving complex from musta
                                                                                                                                                                                                                                                                                                                                                       A; Cross-references: GB: chr_IV; PIDN: AAC19186.1; PID: 93193148; GSPDB: GN00022;
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N;Alternate names: photosystem II extrinsic membrane protein 23K chain 
C;Species: Sinapis alba (white mustard) 
C;Date: 01-Dec-1989 #sequence_revision 01-Dec-1989 #text_change 09-Jul-
C;Accession: S03888 
R;Wenng, A.; Ehmann, B.; Schaefer, E.
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C;Superfamily: cGMP-dependent protein kinase; cAMP
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73
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Pred. No. 23;
3; Mismatches
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Pred. No. 59;
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                             3;
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Best Local Similarity 53.3%;
Matches 8; Conservative
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154 SLKKDYGDKERLAQV 168
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Best Local Similarity
Matches 6; Conserv
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A, Status: preliminary
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A;Cross-references: EMBL:X58910; NID:g19895; PIDN:CAA41713.1; PID:g19896 R;Palomares, R.; Herrmann, R.G.; Oelmueller, R. submitted to the EMBL Data Library, January 1992 A;Description: Posttranscriptional and posttranslational regulatory step.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 45.0%; Score 45; DB 2; Length 268; Best Local Similarity 59.1%; Pred. No. 11; Matches 13; Conservative 1; Mismatches 4; Indels
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(fragment)

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CESP: F55A8

Matches

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Photosystem II oxygen-evolving complex protein 2 precursor - spinach
NiAlternate names: water-splitting complex extrinsic membrane protein 23K chain
C;Species: Spinacia oleracea (spinach)
C;Accession: So0005; S03272
R;Jansen, T; Rother, C.; Steppuhn, J.; Reinke, H.; Beyreuther, K.; Jansson, C.; Anderssc
FEBS Lett. 216, 234-240, 1987
A;Title: Nucleotide sequence of cDNA clones encoding the complete '23 kDa' and '16 kDa' k
A;Reference number: S00005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Accession: S00005
A;Molecule type: mRNA
A;Rosdidues: 1-267 <-JAN>
A;Rosdidues: 1-267 <-JAN>
A;Cross-references: UNIPROT: P12302
A;Note: part of this sequence, including the amino end of the mature protein, was confirm R;Murata, N.; Kajlura, H.; Fujimura, Y.; Miyao, M.; Murata, T.; Watanabe, A.; Shinozaki, Protes; Partial amino acid sequences of the proteins of pea and spinach photosystem II c
A;Reference number: S03269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C.Superfamily: photosystem II oxygen-evolving complex protein 2
C.Keywords: chloroplast; manganese; membrane protein; photosynthesis; photosystem II; th):
F:1.81.Domain: transit peptide (chloroplast) #status predicted <TNP>
F:82-267/Product: photosystem II oxygen-evolving complex protein 2 #status experimental <
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A,Experimental source: gerogroup O1; strain N16961; biotype E1 Tor
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R;Heidelberg, J.F.; Eisen, J.A.; Nelson, W.C.; Clayton, R.A.; Gwinn, M.L.; Dodson, R.J. chardson, D.; Ermolaeva, M.D.; Vamathevan, J.; Bass, S.; Qin, H.; Dragoi, I.; Sellers, I. R.R.; Makalanos, J.J.; Venter, J.C.; Fraser, C.M.
Nature 406, 477-483, 2000
A;Title: DNA Sequence of both chromosomes of the cholera pathogen Vibrio cholerae.
A;Reference number: A82035; MUID: 20406833; PMID: 10952301
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Vibrio cholerae
C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 09-Jul-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
      Gaps
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      'n
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44.5%; Score 44.5; DB 2; Length 267;
Best Local Similarity 55.0%; Pred. No. 14;
Matches 11; Conservative 2; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 92;
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      Indels
      4.
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Pred. No. 5.4;
4; Mismatches
      3; Mismatches
                                                                                                 1 LLVVPAIKK---DYGSQEDF 17
                                                                  1 LLVVPAIKK---DYGSQEDF 17
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Local Similarity 53.3%;
les 8; Conservative '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17
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68 VIPGLKKDY--EDDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 VVPAIKKDYGSOEDF
      10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: protein A; Residues: 82-117 < MUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A,Accession: H82371
A,Status: preliminary
A,Molecule type: DNA
A,Residues: 1-92 <HEI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: S03272
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A;Map position: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc:
Matches
         Matches
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                                                                  ò
                                                                                                                       A,Cross-references: UNIPROT:P11594, EMBL:Y07498, NID:g21151, PIDN:CAA68801.1, PID:g82928 C;Superfamily: photosystem II oxygen-evolving complex protein 2 (F.Keywords: chloroplast; membrane protein; photosynthesis; photosystem II; thylakoid F;1.622Domain: transit peptide (chloroplast) (fragment) #status predicted <TNP> F;63-248/Product: photosystem II oxygen-evolving complex protein 2 #status predicted <MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: UNIPROT:P11594; EMBL:X17213; NID:g21132; PIDN:CAA35081.1; PID:g21133 C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Accession: JC5271
A;Molecule type: DNA
A;Residues: 1-263 <KOC>
A;Cross-references: UNIPROT:Q42029; EMBL:X98108; NID:g1769904; PIDN:CAA66785.1; PID:g176
C;Comment: This protein is necessary for photosystem II to be fully functional in vivo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Kochhar, A.; Khurana, J.P.; Tyagi, A.K.
DNA Res. 3, 277-285, 1996
A;Title: Nucleotide sequence of the psbP gene encoding precursor of 23-kDa polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     photosystem II oxygen-evolving complex protein 2 - white mustard
NyAlternate names: photosystem II oxygen-evolving complex 23K protein
C;Species: Sinapis alba (white mustard)
C;Date: 31-Dec-1990 #sequence_revision 31-Dec-1990 #text_change 09-Jul-2004
C;Accession: S10016
R;MerKle, T; Krenz, M; Wenng, A.; Schaefer, E.
Plant Mol. Biol. 14, 889-890, 1990
A;Title: Nucleotide sequence and deduced amino acid sequence of a gene encoding the 3,Reference number: S10016; MUID:91346684; PMID:2102868
A;Recession: S10016
A;Melecule type: DNA
A;Residues: 1-260 <MER>
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C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 25-Apr-1997 #sequence_revision 09-May-1997 #text_change 09-Jul-2004
C;Accession: JG5271
R;Kochhar, A.; Kluřana, J.P.; Tyagi, A.K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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C;Superfamily: photosystem II oxygen-evolving complex protein 2
C;Keywords: chloroplast; photosynthesis; photosystem II; thylakoid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 263;
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                                                                                                                                                                                                                                                                                                             DB 2; Length 248;
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A;Introns: 83/1; 160/3; 172/3
C;Superfamily: photosystem II oxygen-evolving complex protein
C;Keywords: chloroplast; thylakoid
                                                                                                                                                                                                                                                                                                                                                                      4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
A;Reference number: S03888; MUID:89211386; PMID:2651153
A;Accession: S03888
A;Molecule type: mRNA
A;Residues: 1-248 <WEN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           omorphogenic mutant.
A;Reference number: JC5271; MUID:97191538; PMID:9039496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 2;
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                                                                                                                                                                                                                                                                                                          44.5%; Score 44.5; D
50.0%; Pred. No. 13;
ive 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 44.5%; Score 44.5; I
Best Local Similarity 50.0%; Pred. No. 13;
Matches 10; Conservative 3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 44.5; I
Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123 VMVTPTDKKSITDYGSPEFF 142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     135 VMVTPTDKKSITDYGSPEEF 154
                                                                                                                                                                                                                                                                                                                                                                                                                                  1 LLVVPAIKK---DYGSQEDF 17
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50.0%;
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                 Query Match
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R.J.; ers, P

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RESULT 15
B70302
molybdenum cofactor biosynthesis protein A - Aquifex aeolicus
C;Species: Aquifex aeolicus
C;Species: Aquifex aeolicus
C;Species: Aquifex aeolicus
C;Species: Aquifex aeolicus
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 16-Aug-2004
C;Accession: B70302
R;Deckert, G.; Warren, P.V.; Gaasterland, T.; Young, W.G.; Lenox, A.L.; Graham, D.E.; Ov.
V.
Nature 392, 353-358, 1998
A;Title: The complete genome of the hyperthermophilic bacterium Aquifex aeolicus.
A;Reference number: A70300; MUID:98196666; PMID:9537320
A;Reference number: A70300; MUID:98196666; PMID:9537320
A;Ression: E70302
A;Residues: 1-402 cAQP>
A;Residues: 1-402 cAQP>
A;Residues: 1-402 cAQP>
A;Residues: 1-402 cAQP>
A;Conserreferences: UNIPROT:066448; GB:AE000670; GB:AE000657; NID:g2982779; PIDN:AAC0640
A;Experimental source: strain VF5
C;Genetics:
A;Genetics:
A;Genetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 LLVVPAIKKDYGSQEDFTQ 19
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Search completed: February 5, 2005, 20:05:42 Job time : 20.661 secs

309 LLVYPAIKAMQGHREVFKQ 327

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GenCore version 5.1.6
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OM protein - protein search, using sw model

February 5, 2005, 19:36:20; Search time 94.9153 Seconds (without alignments) 107.902 Million cell updates/sec Run on:

US-09-780-669-114\_COPY\_120\_139 100 1 LLVVPAIKKDYGSQEDFTQV 20 Title: Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

1612378 seqs, 512079187 residues Searched:

1612378 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

UniProt\_03:\*
1: uniprot\_sprot:\*
2: uniprot\_trembl:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

,	Description	reines omod 26080	0				-	vibrio ch			Q9rb12 pectobacter	Q8zjs3 yersinia pe	erwinia	Q9pl73 chlamydia m	Q8lts5 lactococcus	Q779i0 lactococcus	Q9g0e7 lactococcus	Q6fd93 acinetobact			Q724v8 listeria mo	Q7vd65 prochloroco	Q65qu5 mannheimia		Q6b7s8 spirometra		Q7vfh5 helicobacte	Q7dm39 nicotiana t	Q40457 nicotiana t	~	Q7pyt9 anopheles q	~
SUMMARIES	10	TSN1 HIMAN		Q6AYR9	Q813H5	Q734B5	QBYLU3	Q9KUB9	Q9P919	066GG7	Q9RB12	Q8ZJS3	Q6DB80	Q9PL73	QBLTSS	016770	Q9G0E7	Q6FD93	Q7WYV1	Q8YAM0	Q724V8	Q7VD65	065QU5	RS24 METMA	Q6B7S8	Q93H75	Q7VFH5	PSP1 TOBAC	040457	Q688A8	Q7PYT9	Q7KPJ2
	DB	-	~	~	7	~	~	7	7	N	~	N	7	~	0	7	~	~	N	~	~	~	N	Н	~	~	~	-	N	0	7	0
	Query Match Length	241	240	241	548	253	347	764	173	83	83	89	83	172	74	74	74	107	303	303	303	9	88	101	222	255	264	268	268	470	601	737
de	Query Match	100.0	84.0	76.0		ö	φ.	49.0		47.0	47.0	47.0	47.0	47.0	46.0	46.0	46.0	46.0	9	46.0		45.5		•	45.0	٠			•	45.0		45.0
	Score	100	84	9/	'n	50.5	<b>4</b>	49	48	47	47	47	47	47	46	46	46	46	46	46	4	45.5	45	45	45	45	45	45	45	45	45	45
	Result No.		N	m	4	ហ	ø	7	80	σ.	10	11	12	13	14	15	16			19	20	21	22	23	24	25	56	27	28	29	30	31

Q688a9 caenorhabdi Q8mxg7 caenorhabdi O7636 caenorhabdi O55196 mus musculu Q5534 brassica ju Q63735 bacillus ce P11594 sinapis alb Q42029 arabidopsis P12302 spinacia ol Q9b1k9 bombyx mori Q9b1k9 bombyx mori Q9b1k1 methanosarc Q6mbi9 parachlamyd Q9p322 pneumocysti
Q688A9 Q8MXG7 Q8MXG7 Q763G0 ENAM MOUSE PSBP BRAJU Q637E PSBP SINAL PSP1 ARATH PSBP SPIOL Q9BLK9 Q9KXV2 RS24 METAC Q6MBI9 Q9P922
00011011100100
743 7493 1274 2517 2517 260 260 264 294 101 1101
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

## ALIGNMENTS

RESULT 1

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RABAR REPARABAR RABAR RA
                                            This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its mee by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-aib.ch/announce/or send an email to license@lsb-sib.ch).
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25-007-2004 (TrEMBLrel. 28, Last annoctation update)
RIKEN CDNA 9030418M05 (Mus musculus adult male colon CDNA, RIKEN full-length enriched library, clone:9030418M05 product:similar to tetraspan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=NMRI; TISSUE=Mammary tumor; MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Wouse),
Sukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
NCBI_TaxID=10090,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cytoplasmic (Potential).

N-linked (GlCNAc. .) (Potential)

N-linked (GlCNAc. .) (Potential)

N-linked (GlCNAc. .) (Potential)

N-linked (GlCNAc. .) (Potential)
SUBCELLULAR LOCATION: Integral membrane protein (Probable).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 100; DB 1; Length 241; Pred. No. 1.4e-08;
                 SIMILARITY: Belongs to the tetraspanin (TM4SF) family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Extracellular (Potential)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AF938AD7147CB884 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytoplasmic (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cytoplasmic (Potential). Potential.
                                                                                                                                                                                                EMBL; AF054838; AAC69714.1; -.
EMBL; AF055388; AAC7119.1; -.
EMBL; AF133425; AAF08364.1; -.
EMBL; BC007230; AAH07290.1; -.
EMBL; BC013404; AAH13404.1; -.
PIR, A59262; A59262.
H-INVDB; HIX0000543; -.
GO; GO:0016021; C:integral to membrane; TAS.
InterPro; IPR000301; Transmem_4.
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01-JUN-2001 (TrEMBLrel. 17, Created)
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PROSITE; PS00421; TM4 1; FALSE NEG.
Glycoprotein; Transmembrane.
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                                                                                                                                                                                                                                                                                                                                                                                       Pfam; PF00335; Tetraspannin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26301 MW;
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154
178
184
189
241 AA;
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TRANSMEM
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TRANSMEM
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TRANSMEM
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Proceedings of the Action of the A. Bonnello M.P., Casavant T.L., Scheetz T.E., Raha & Expensed N.B., Bonaldo M.P., Casavant T.L., Scheetz T.E., Raha & S.E., Loquellano N.A., Bonaldo M.P., Casavant T.L., Scheetz T.E., Raha & S.L., Loquellano N.A., Peters G.J., Alxameon R.D., Mullady S.J., Raha & S.L., Loquellano N.A., Peters G.J., Alxameon R.D., Mullady S.J., Raha & S.L., Loquellano N.A., Peters G.J., Alxameon R.D., Mullady S.J., Raha & S.L., Loquellano N.A., Peters G.J., Alxameon R.D., Mullady S.J., Mallady S.J.,
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Matches
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Q813H5
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N. Tisbus-Kindney;

N. Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Rausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hende L.,

B Donateien M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

B Comnstein M.J., Usdin T.B., Toobhlyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

B Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

N. Milalon D.K., Muzny D.M., Sodergren B.J., Lu X., Glbbs R.A.,

Richards S., Worley K.C., Hale S., Garchenko Y., Boulfard G.G.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Buterfield Y.S.,

Nones S.J., Marra M.A.,

Jones S.J., Marra M.A.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Buterfield Y.S.,

Annes S.J., Marra M.A.,

Jones S.J., Marra M.A.,

Rodriguez A.M., Sochert L.D., Schmutz J., Myers R.M., Buterfield Y.S.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,

Jones S.J., Marra M.A.,

Rodriguez A.M., Schein H.D., Schmetch A., Schein J.E.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Buterfield Y.S.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Schein J.E.,

Rodriguez A.C., Grimwood J., Schmut J. Schmut J. Schmut 
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Kawai J., Kojima Y., Komo H., Kouda M., Koya S., Kurihara C., Mateuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M., Okazaki Y., Okido T., Owa C., Salto H., Saito R., Sakai C., Sakai K., Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T., Sogabe Y., Suzuki H., Tagami M., Tagawa A., Takahashi F., Tanaka T., Tejima Y., Toya T., Yamamura T., Yamanaka I., Yasunishi A., Yoshino M., Muramatsu M., Hayashizaki Y., Submitted (ARR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL, BC003448; AAH034481.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus (Rat).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
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Director MGC Project;
Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS; PR00342; RHESÜSRHD.
PRINTS; PR00259; TMP01R.
PROSITE; PS00421; TM4 1; 1.
SEQUENCE 240 AA; 26356 MW; AD4C448A32BC2999 CRC64;
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25-OCT-2004 (TrEMBLrel. 28, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                 MGD; MGI:1914055; 9030418M0SRik.
G0; G0050515; C:extracellular space; TAS.
G0; G0:0016021; C:integral to membrane; TAS.
InterPro; IPR002229; RhesusRHD.
InterPro; IPR008922; Tetraspanin.
InterPro; IPR008932; Tetraspanin.
InterPro; IPR009331; Tetraspanin.
Pfam; PP00335; Tetraspannin.
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Q6AYR9
ID AC Q6AYI
AC Q6AYI
DT 25-O
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Hall N., Pain A., Berriman M., Churcher C., Harris B., Harris D.,
Hall N., Pain A., Berriman M., Churcher C., Harris B., Harris D.,
A mungall K., Bowman S., Atkin R., Baker S., Barron A., Brooks K.,
Buckee C.O., Burrows C., Cherevach I., Chillingworth C.,
A chillingworth T., Christodoulou Z., Clark L., Clark R., Corton C.,
A cronin A., Davies R., Davis P., Dear P., Dearden F., Doggett J.,
A Feltwell T., Goble A., Goodhead I., Gwilliam R., Hamlin N., Hance Z.,
A Humphray S., Jagels K., James K.D., Johnson D., Kerhornou A.,
A Humphray S., Jagels K., James K.D., Johnson D., Kerhornou A.,
A mights A., Konfortov B., Kyes S., Larke N., Lawson D., Lennard N.,
Line A., Maddison M., Mclean J., Mooney P., Moule S., Murphy L.,
A line A., Maddison M., Relector K.M., Sanders M., Simmonds M.,
Sageler K., Ormond D., Frice C., Quail M.A., Rabbinowitsch E.,
Sageger K., Sharp S., Smith R., Squares S., Stevens K.,
Sageler K., Tivey A., Umwin L., Whitehead S., Woodward J.,
Sulston J.E., Craig A., Newbold C., Barrell B.G.
Warner A., Marker S., Stell R., Squares S., 3 and 13.";
                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Devlin K., Baker S., Davies P., Mungal K., Berriman M., Pain A., Hall N., Bowman S., Churcher C., Quail M., Barrell B.; Submitted (SEP-2002) to the EMBL/GenBank/DDBJ databases.
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NCBI_TaxID=36329;
                                                                                                                                                                                                                                                                                                       Length 241;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 548;
                                                                                                                                                                                                                                                                                                76.0%; Score 76; DB 2; Length 241
78.9%; Pred. No. 0.00019;
.ive 2; Mismatches 2; Indels
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                                                                                                                                                                                                        PROSITE; PS00421; TM4 1; 1.
SEQUENCE 241 AA; 26453 MW; 9118E865464D1A70 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature 419:527-531(2002).
EMBL; AL929354; CAD51653.1; -.
SEQUENCE 548 AA; 63768 MW; 245CACD595067CF3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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50.0%; Pred. No. 9.1;
ative 4; Mismatches
      membrane; IEA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             548 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             253 AA.
GO; GO:0016021; C:integral to membr.
InterPro; PRR002229; RhesusRHD.
InterPro; IPR000352; Tetraspanin.
InterPro; IPR000301; Transmem 4.
Pfam; PR00335; Perraspannin; 1.
PRINTS; PR00342; RHESUSRHD.
PRINTS; PR00359; TMFOUR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plasmodium falciparum (isolate 3D7)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 LVVPAIEKDYGYQTEFTQV 139
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sugar transporter, putative.
Name=PFE1455w;
                                                                                                                                                                                                                                                                                                                                3est_Local Similarity 78.9
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SECUENCE FROM N.A.
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Q734B5;
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ID Q7
AC Q7
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764 AA

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PRELIMINARY;
                                                                                                                                                                                             Vibrio cholerae
                                                                                                                                                                                                                                                                NCBI_TaxID=666;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cholerae."
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                        Q9KUB9
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                                                                                                                                                                                                                           Pubmed=14960714; DOI=10.1093/nar/gkh258;
Rasko D.A., Ravel J., Oekstad O.A., Helgason E., Cer R.Z., Jiang L., Shores K.A., Fouts D.E., Tourasse N.J., Angiuoli S.V., Kolonay J.F., Nelson W.C., Kolstoe A.-B., Fraser C.M., Read T.D., Kolonay J.F., The genome sequence of Bacillus cereus ArCt 10987 reveals metabolic adaptations and a large plasmid related to Bacillus anthracis pXOI."; Nucleic Acids Res. 32:977-988 (2004).

IIGR: BCE3492:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 49; DB 2; Length 347;
Pred. No. 12;
4; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alr5203 protein.
OrderedLocusNames=alr5203;
Anabaena sp. (strain PCC 7120).
Bacteria; Cyanobatteria; Nostocales; Nostocaceae; Nostoc.
NCBI_TaxID=103690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                     Bacillus cereus (strain ATCC 10987).
Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      GO; GO:0008233; F:poptidase activity; IEA.
InterPro; IPR003675; Abi.
Pfam; PF02517; Abi; L:
Complete proteome; Protesse.
SEQÜENCE 253 AA; 28985 MW; 9572AA6F36352785 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        347 AA; 40541 MW; AFBC249221FEB26D CRC64;
05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
CAAX amino terminal protesse family family.
OrderedLocusNames=BCE3492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50.5%; Score 50.5; DB 2; 55.0%; Pred. No. 4.7; iive 3; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    347 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=21595285; PubMed=11759840;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam, PF00535; Glycos_transf_2; 1.
Complete proteome.
SEQUENCE 347 AA; 40541 MW; AFBG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               329 LELPIIKKEISSVKEFTQV 347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              48 IMPAIIAISLKKKYGSQEEF 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 VVPAI ----KKDYGSQEDF 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LVVPAIKKDYGSQEDFTQV 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA Res. 8:205-213(2001).
EMBL; AP003599; BAB76902.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 52.00,
Best Local 10, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                 NCBI_TaxID=222523;
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                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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RESULT 7

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Dei-Cas E., Wakefield A.E.;
"Genetic divergence at the SODA locus of six different formae "Genetic divergence at the SODA locus of six different formae speciales of Pheumocystis carini:";
Med. Mycol. 38:289-300(2000).
-!- FUNCHION: Destroys radicals which are normally produced within the cells and which are toxic to biological systems (By similarity).
-!- CATALYMIC ACTIVITY: 2 superoxide + 2 H(+) = O(2) + H(2)O(2).
-!- SIMILARITY: Belongs to the iron/manganese superoxide dismutase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Fungi; Ascomycota; Pneumocystidomycetes; Pneumocystidaceae;
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                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=EI TOR N16961 / Serotype O1;
MEDLINE=21406833; PubMed=10952301; DOI=10.1038/35020000;
MEDLINE=20406833; PubMed=10952301; DOI=10.1038/35020000;
MEDLINE=20406833; PubMed=10952301; DOI=10.1038/35020000;
Meldelberg J.F., Eisen J.A., Nelson W.C., Clayton R.A., Gwinn M.L., Dodson R.J., Haft D.H., Hickey E.K., Peterson J.D., Umayam L.A., Gill S.R., Vanscherg T.D., Tettelin H., Richardson D.L., Sellers P., McDonald L.A., Utterback T.R., Fleischmann R.D., Nierman W.C., White O., Salzberg S.L., Smith H.O., Colwell R.R., McRalanos J.J., Venter J.C., Fraser C.M.;
DNA, sequence of both chromosomes of the cholera pathogen Vibrio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                   Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales; Vibrionaceae; Vibrio.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2; Length 764;
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Complete proteome; Hypothetical protein.
SEQUENCE 764 AA; 85616 MW; 0C3CC8BCA100C840 CRC64;
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                     Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GO; GO:0003824; F:catalytic activity; IEA.
GO; GO:0003676; F:nucleic acid binding; IEA.
GO; GO:0045735; F:nucrient reservoir activity; IEA.
InterPro; IPR008994; Nucleic_acid_OB.
InterPro; IPR002441; Patatin.
PF01734; Patatin; 1.
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Pred. No. 29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4; Mismatches
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01-OCT-2000 (TrEMBLrel. 15, Last seq
01-MAR-2004 (TrEMBLrel. 26, Last ann
Created)
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MEDLINE=20427437; PubMed=10975697;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pneumocystis carinii f. sp. suis.
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                     ol-UCI-2000 (TrEMBLrel. 15, 01-MAR-2004 (TrEMBLrel. 26, Hypotherical protein VC0603, orderedLocubames=VC0603;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nature 406:477-483 (2000).
EMBL; AE004145; AAF93770.1;
PIR; B82303; B82303.
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Best Local Similarity 45.v.
9; Conservative
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NCBI_TaxID=112251;
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Song Y., Tong Z., Wang L., Han Y., Zhang J., Pei D., Wang J., Zhou D.,
  01-MAR-2004 (TrEMBLrel. 26, Last annotation update)
                                                                                                                                                                                                   Pfam; PF06288; DUF1040; 1
                                                                                                                                                                                                                                         Local Similarity 60.0
les 9; Conservative
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64 VIPGLKKDY--EEDF
                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                          rersinia pestis.
                                                                          NCBI_TaxID=555;
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Matches
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EMBL; BX936398; CMH19255.1; - InterPro; IPR009383; DUF1040.

Pram. PF06288; DUF1040.
                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                           Yersinia pseudotuberculosis IP 32953.
Bacteria, Proteobacteria, Gammaproteobacteria, Enterobacteriales,
Enterobacteriaceae, Yersinia.
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                                                                                                                                                                                        Score 48; DB 2; Length 173;
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Pred. No. 5.8;
3; Mismatches 1; Indels
                                                                                                                                                                                                           Indels
                                                                                                                                                                   69110EFD0005665B CRC64;
                            GO; GO:0046872; F:metal ion binding; IEA.
GO; GO:0016491; F:oxidoreductase activity; IEA.
GO; GO:0016491; F:oxidorexide dismutase activity; IEA.
GO; GO:0006801; F:superoxide dismutase activity; IEA.
InterPro; IPR001189; SODismutase.
InterPro; IPR001189; SODismutase.
Pfam; PF00777; Sod_Fe_C; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89 AA; 10168 MW; C240C03A620D66F9 CRC64;
                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
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Last sequence update)
                                                                                                                                                                                                 8.3;
                                                                                                                                                                                                                                                                                                        89 AA.
                                                                                                                                                                                                 Pred. No. 8.3;
5; Mismatches
                                                                                                                                                                                                                                                                                                                            Created)
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                                                                                                   PRINTS; PRO1703; MNSODISMTASE.
PRODOM; PD000475; SODismutase; 1.
PROSITE; PS00088; SOD_MN; 1.
Oxidoreductase.
                                                                                                                                                                                                                                         3 VVPAIKKDYGSQEDFTQV 20
        EMBL; AF146755; AAF25727.1; -. HSSP; Q92450; 1KKC.
                                                                                                                                                                   173 AA; 20099 MW;
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(TrEMBLrel. 28, I
(TrEMBLrel. 28, I
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64 VIPGLKKDY--EEDF 76
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                                                                                                                                                                           Query Match
Best Local Similarity 50.v.
Best Local 9; Conservative
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                                                                                                                                                                                                                                                                                                                                                          Hypothetical protein.
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9, Conserva
                   Q92450; 1KKC.
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                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=IP 32953;
PubMed=15358858;
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Q9RB12;
01-MAY-2000 (
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Q9RB12
ID Q9RB1
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DT 01-MA
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Q66GG7
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DOI=10.1128/JB.184.16.4601-4611.2002;
Deng W., Burland V., Plunkett G. III, Boutin A., Mayhew G.F., Liss P.,
Perna N.T., Rose D.J., Mau B., Zhou S., Schwartz D.C.,
Fetherston J.D., Lindler L.B., Brubaker R.R., Plano G.V.,
Straley S.C., McDonough K.A., Nilles M.L., Matson J.S., Blattner F.R.,
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                                                                                                                                                                                                                                                                 STRAIN=SCRI193;
MEDLINE=99392457; PubMed=10463161;
Vincent-Sealy L.V., Thomas J.D., Commander P., Salmond G.P.;
Vincent-Sealy L.V., Thomas J.D., Commander P., Salmond G.P.;
Erwinia carotcovera Dabb mutants: evidence for a periplaemic-stress signal transduction system affecting transcription of genes encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
Pectobacterium carotovorum (subsp. carotovorum) (Erwinia carotovora (subsp. carotovora)).
                                                                         Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales; Enterobacteriaceae; Pectobacterium.
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Enterobacteriaceae; Yersinia.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 89;
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STRAIN=91001 / Biovar Mediaevalis;
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STRAIN-KIMS / Biovar Mediaevalis;
MEDLINE-22137863; PubMed=12142430;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 secreted proteins.";
dicrobiology 145:1945-1958 (1999).
EMBL; AF146615; AAD47615.1;
InterPro; IPR009383; DUF1040.
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Bacteria; Chlamydiae; Chlamydiales; Chlamydiaceae; Chlamydia.
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Best Local Similarity 44.4
Matches 8; Conservative
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                                             SEQUENCE FROM N.A.
                  NCBI_TaxID=83560;
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01-JUN-2003
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Q77910;
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Matches
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Q8LTS5
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SEQUENCE FROM N.A.
SERRAINS-SCRI 1043 / ATCC BAA-672;
PubMed=15263089; DOI=10.1073/pnas.0402424101;
Bell K.S., Sebaiha M., Pritchard L., Holden M.T.G., Hyman L.J.,
Holeva M.C., Thomson N.R., Bentley S.D., Churcher L.J.C., Mungall K.,
Atkin K., Bason N., Brooks K., Chillingworth T., Clark K., Doggett J.,
Fraser A., Hance Z., Hauser H., Jagels K., Moule S., Norbertczak H.,
Ormond D., Price C., Quail M.A., Sanders M., Walker D., Whitehead S.,
Salmond G.P.C., Birch P.R.J., Parkhill J., Toth I.K.,
"Genome sequence of the enterobacterial phytopathogen Erwinia
"Garotovora subsp. atroseptica and characterization of virulence
                                                                                                                                                                                                                                                                                                                                                                                                                   Erwinia carotovora (subsp. atroseptica) (Pectobacterium atrosepticum).
Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
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 Han Y., Pang X., Zhai J., Chen F., Qin H., Wang J., Li S., Guo Z.,
Ye C., Du Z., Lin W., Wang J., Yu J., Yang H., Wang J., Huang P.,
Yang R.;
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                                                                                                                                                                      Score 47; DB 2; Length 89;
Pred. No. 5.8;
3; Mismatches 1; Indels
                                                 Submitted (APR-2003) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Proc. Nati. Acad. Sci. U.S.A. 101:11105-11110(2004).

EMBL, BX950851; CAG72942.1; -.

InterPro; IPR009383: DUF1040.

Pfam, PF06288; DUF1040; 1.

Complete proteome; Hypothetical protein.

SEQUENCE 89 AA; 10418 MW; 0CEFDDD71E8647A0 CRC64;
                                                                                                                                               C240C03A620D66F9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-077-2000 (TrEMBLrel. 15, Created)
01-077-2000 (TrEMBLrel. 15, Last sequence update)
01-077-2003 (TrEMBLrel. 24, Last annotation update)
Hypothetical protein TC0235.
OrderedLocusNames=TC0235;
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Last annotation update)
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                                                             EMBL; AJ414141; CAC88881.1; -...
EMBL; AE013984; AAM87359.1; -...
EMBL; AE017127; AAS60296.1; -...
PIR; AG0002; AG0002.
Pfam; PF06289; DUF1040; 1...
Complete protecome; Hypothetical protein.
SEQUENCE 89 AA; 10168 MW; C240C03A621
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VIPGLKKDY--EEDF 76
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                                                                                                                                                              Query Match
Best Local Similarity 60.0.
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les 9; Conservative
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STRAIN=MoPn / Nigg;
MEDLINE=20150255; PubMed=10684935; DOI=10.1093/nar/28.6.1397;
Read T.D., Brunham R.C., Shen C., Gill S.R., Heidelberg J.F.,
White O., Hickey B.K., Peterson J.D., Utterback T.R., Berry K.J.,
Bass S., Linher K.D., Weidman J.F., Khouri H.M., Craven B., Bowman C.,
Dodson R.J., Gwinn M.L., Nelson W.C., DeBoy R.T., Kolonay J.F.,
McClarty G., Salzberg S.L., Eisen J.A., Fraser C.M.,
"Genome sequences of Chlamydia trachomatis MoPn and Chlamydia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Putative cro-like repressor.
Lactococcus lactis bacteriophage ul36.
Viruses, dsDNA viruses, no RNA stage, Caudovirales; Siphoviridae.
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44.4%; Pred. No. 12;
ive 6; Mismatches 4; Indels
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Pred. No. 7.1;
3; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                             InterPro; IPR007966; DUF720.
Pfam; PF05302; DUF720; 1.
Complete proteome; Hypothetical protein.
SEQUENCE 172 AA; 18923 MW; BB6AA6C64AA88AAB CRC64;
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Last annotation update)
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(TremBlrel. 22, Last sequence update)
(TremBlrel. 24, Last annotation update)
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                                                                                                                                                                                                                 pneumoniae "AR39.";
Nucleic Acids Res. 28:1397-1406(2000).
EMBL; AE002290; AAF39106.1; -.
PIR; C81726; C81726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; ĀF349457; AAM75754.1; -.
Interpro; IPR008003; DUF739.
Interpro; IPR010982; Lambda_llke_DNA.
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Conservative
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79 LLYVPSLEKKQGSDDEYT
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SEQUENCE FROM N.A.

MEDLINE=21141825; PubMed=11229902;

DOI=10.1128/AEM.67.3.1128-1139.2001;

Madsen S.M., wills D., Djordjevic G., Israelsen H., Klaenhammer T.R.;

"Analysis of the genetic switch and replication region of a P335-type bacteriophage with an obligate lytic lifestyle on Lactococcus
         Lactococcus bacteriophage phi31.
Viruses; dsDNA viruses, no RNA stage; Caudovirales; Siphoviridae.
VCBI_TaxID=46654;
                                                                                                                                                                                                                                                                                                                                                 Query Match
46.0%; Score 46; DB 2; Length 74;
Best Local Similarity 61.5%; Pred. No. 7.1;
Matches 8; Conservative 3; Mismatches 2; Indels
                                                                                                                                                                                                                  EMBL: AJ292531; CAC04155.1; -
InterPro; IRR008003; DUF739.
FAM: PFO: IPR010982; Lambda_like_DNA.
Ffam: PP05339; DUF739; 1.
SEQUENCE 74 AA; 8533 MW; B42AZF18180B5867 CRC64;
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Search completed: February 5, 2005, 20:04:40 Job time : 97.9153 secs

7 IKKDYGSQEDFTQ 19 ||: ||||:||: 12 IKEKYGSQQDFAK 24

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5, 2005, 19:34:18; Search time 99.5085 Seconds (without alignments) 73.847 Million cell updates/sec
GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
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1 GFTNYTDFEDSPYFKENSA 19
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seq length: 0 seq length: .200000000 Minimum DB e Maximum DB e

Total number of hits satisfying chosen parameters:

2105692 seqs, 386760381 residues

Searched:

2105692

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries geneseqp2001s:\* geneseqp2002s:\* geneseqp2003as:\* geneseqp2003bs:\* geneseqp2004s:\* A\_Geneseq\_16Dec04:\* geneseqp1980s:\* geneseqp1990s:\* geneseqp2000s:\* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

	Description	Aam01157 Human pro		Aag99042 Human pro	Prosta	a	Abr54374 Prostate	Adb13954 Human pro	Adg26370 Human pro	_	Adp81123 Protein o		Adr66892 Human pro	Aaw75060 Human sec	Abo01936 Novel hum	Aag62153 Human P50	Abb89113 Human pol	Aaw69386 Prostate	Aaw59954 Amino aci	Aaw71870 Amino aci	Aaw58380 Human sec	m	Abg94412 Human pro	Aam01118 Human pro	Aau69764 Human pro	TOTAL TOTAL
	ΩI	AAM01157	AAU69802	AAG99042	ABU71693	ABB95262	ABR54374	ADB13954	ADG26370	ADD69590	ADP81123	ADR65994	ADR66892	AAW75060	AB001936	AAG62153	ABB89113	AAW69386	AAW59954	AAW71870	AAW58380	AAY82003	ABG94412	AAM01118	AAU69764	1087480
	08	4	4	4	4	S	9	7	7	7	æ	æ	8	~	9	4	S	~	~	~	7	m	m	4	4	٧
	Query Match Length DB	19	19	19	19	19	19	19	19	172	174	214	214	233	233	240	240	241	241	241	241	241	241	241	241	170
<u>.</u>	Query	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	0
	Score	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	301
	Regult No.	1	8	٣	4	S	9	7	80	σ	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	20

The present invention describes polynucleotide sequences (I) which encode prostate-specific proteins (II). (I) and (II) have cytostatic activity, and can be used in vaccine production and gene therapy. (I), (II), antibodies to (II), fusion proteins comprising (II), and isolated r cells prepared using (I) or (II) are used treat cancer in a patient. (I) and the antibodies are also used in the detection of cancer in a patient. The cancer that is diagnosed or treated is paticularly prostate cancer. The and (II) can be used in vaccines. The antibodies or (I) can be used for monitoring the progression of cancer in a patient. (I) and of the prostate cancer in a patient. (I) and (II) can also be used to improve diagnostic and therapeutic methods for prostate cancer. They can indicate the level of metastasis as well as the prostate

Claim 2; Page 399; 543pp; English.

Aag99003 Human pro	Abu71654 Prostate	Aab90679 Human AR4	Aau04962 Human pro	Abg96434 Human ova	Abb95223 Human N1-	Abg76666 Prostate	Abr54335 Prostate	Adb75601 Prostate	Adb13564 Human pro	Adg25980 Human pro	Adn39286 Cancer/an	Abg96433 Human ova	Adb75599 Prostate	Aaw61618 Clone HPW	Abw01500 Human rec	Aay36171 Human sec	Aay36218 Human sec	Adj45976 Novel hum	Adj46070 Novel hum
AAG99003	ABU71654	AAB90679	AAU04962	ABG96434	ABB95223	ABG76666	ABR54335	ADB75601	ADB13564	ADG25980	ADN39286	ABG96433	ADB75599	AAW61618	ABW01500	AAY36171	AAY36218	ADJ45976	ADJ46070
241 4	241 4	241 4	241 4	241 5	241 5	241 5	241 6	241 7	241 7	241 7	241 7	258 5	258 7	273 2	273 7	43 2	43	43 7	43 7
100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	82.1	82.1	82.1	82.1
106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	87	87	87	81
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

### ALIGNMENTS

New polynucleotide encoding a prostate-specific protein, for diagnosing, monitoring and treating prostate cancer in a patient and for use in Human prostate-specific peptide used in epitope mapping studies #14. Harlocker SL, Jiang Y, Reed SG; Retter MW, Stolk JA, Skeiky YAW; Human; prostate cancer; prostate-specific; diagnosis; vaccine; cytostatic; gene therapy; metastasis. AAM01157 standard; peptide; 19 AA. Dillon DC, Mitcham JL, dD, Fanger GR, Day CH, 16-JAN-2001; 2001WO-US001574. 14-JAN-2000; 2000US-00483672. (first entry) Xu J, Dillon DC, Mi Kalos MD, Fanger GR, Wang A, Meagher MJ; (CORI-) CORIXA CORP. WPI; 2001-425873/45. WO200151633-A2. Homo sapiens. 04-OCT-2001 19-JUL-2001. AAM01157; vaccines. RESULT 1 AAM01157 

Gaps

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Length 19; Indels

100.0%; Score 106; DB 4; 100.0%; Pred. No. 6.2e-09; Mismatches

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antigenic epitopes or domains of prostate specific proteins
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                                                                                                                Best Local Similarity 100.
Matches 19; Conservative
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                                                    Sequence 19 AA;
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18-NOV-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                AAG99042;
                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                       RESULT 3
                                                                                                                                                                                                                                                                                                                               AAG99042
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to isolated prostate-specific polynucleotides, polypeptides, fusion proteins of the polypeptides, antibodies raised against the polypeptides for antigenic epitopes derived from them) and antigen-presenting cells expressing the polypeptides. The antibodies are useful for detecting the presence of cancer, especially prostate cancer. The polypeptides, polynucleotides and the antigen-presenting cells are useful for stimulating and/or expanding T cells specific for a tumour protein, and for inhibiting the development of cancer especially prostate cancer. Compositions comprising the polynucleotide and/or polypeptide are useful for stimulating an immune response, and for treating cancer. The oligonucleotide is useful for detecting cancer. The prostate specific peptide of the invention. The peptides either represent
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; prostate cancer; ss; cytostatic; immunostimulant; tumour; antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New human prostate-specific polypeptides and polynucleotides useful for the diagnosis and treatment of cancer, especially prostate cancer.
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  volume. AAH93357 to AAH93944 and AAM01115 to AAM01318 represent polynuclectide and amino acid sequences used in the exemplification the present invention
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Carter D;
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                                                                                                                                                   Length 19;
                                                                                                                                                                                              Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human prostate protein epitope mapping peptide #1
                                                                                                                                                 100.0%; Score 106; DB 4;
100.0%; Pred. No. 6.2e-09;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                         AAU69802 standard; peptide; 19 AA
                                                                                                                                                                                                                                                                      GFTNYTDFEDSPYFKENSA 19
                                                                                                                                                                                                                                              1 GFTNYTDFEDSPYFKENSA 19
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09-MAY-2000; 2000US-00568100.

12-MAY-2000; 2000US-0057037.

13-UIN-2000; 2000US-00593793.

27-UIN-2000; 2000US-0063783.

09-AUG-2000; 2000US-0063783.

66-SEP-2000; 2000US-00637279.

02-OCT-2000; 2000US-00651279.
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09-NOV-2000; 2000US-00709729
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                   19; Conservative
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                                                                                                                                                                           Best Local Similarity
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                                                                                                           Sequence 19 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
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Li SX, Wan
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU69802;
                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    epitope.
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                                                                                                                                                                                                      Matches
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The present invention describes an isolated polypeptide (P1) comprising at least an immunogenic portion of a prostate-specific protein, or its variant. Also described are polymucleotides (N1) encoding (P1). (P1) and (N1) have eytostatic activity and can be used in vaccine production. The polypeptides, nucleic acids and antibodies from the present invention are useful in the diagnosis and therapy of prostate ancer. Prostate specific genes PPO44, P712P, P775P and B305D are located in a genomic region on chromosome 2241.2 known as the Cat Eye Syndrome region. Prostate specific antigen (PSA) P501S was located on chromosome 1. ARR84671 to AAR85143 and AAG99000 to AAG99077 represent polynucleit invention invention
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Isolated polypeptide comprising at least an immunogenic portion of a prostate-specific protein, useful in the diagnosis and therapy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Reed SG;
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                                                                                                                                                                                                                                Human; prostate cancer; therapy; diagnosis; cat eye syndrome; chromosome 22q11.2; prostate-specific protein; chromosome 1; prostate specific antigen; PSA.
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Best Local Similarity 100.0%; Pred. No. 6.2e-09;
Matches 19; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mitcham JL, Harlocker SL, Jiang Y,
Mw, Stolk JA, Day CH, Skeiky YAW,
                                                                                                                                                                           Human prostate-specific epitope mapping peptide #14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 3; Page 299; 325pp; English.
AAG99042 standard; peptide; 19 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99US-00439313.
                                                                                                                          (first entry)
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Kalos MD, Retter MW,
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Gaps

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prostate cancer therapy associated peptide. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from the US patent office at seqdata.uspto.gov/sequence.html?bocID=US20020192763
                                                                                                                                                                                                                                                                                                                                                                  cancer; prostate cancer; vaccine; cytostatic; immunostimulant;
                                                                                              100.0%; Score 106; DB 4; Length 19; 100.0%; Pred. No. 6.2e-09; Live 0; Mismatches 0; Indele
                                                                                                                                                                                                                                                                                                                                      Epitope mapping study peptide SEQ ID NO 504.
                                                                                                                                                                                                                                                   ABB95262 standard; peptide; 19 AA.
                                                                                                                                                     1 GFTNYTDFEDSPYFKENSA 19
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97US-00204804.
98US-00020607.
98US-00115453.
98US-00159812.
99US-00232149.
99US-00322616.
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2000US-00636215.
2000US-00631236.
2000US-00657279.
2000US-0067426.
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2000US-00483672.
2000US-00536857.
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2000US-00570737
2000US-00593793
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                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                           Best Local Similarity 100.
Matches 19, Conservative
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MITCHAM J L.
HARLOCKER S L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JIANG Y.
KALOS M D.
FANGER G R.
RETTER M W.
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DAY C H.
VEDVICK T S.
CARTER D.
LI S X.
                                                                                                                                                                                                                                                                                                                                                                                                                                   US2002022248-A1.
                                                                    Sequence 19 AA;
                                                                                                                                                                                                                                                                                                                                                                               gene therapy.
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10-AUG-2000;
29-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                         Unidentified.
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09-APR-1999;
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27-MAR-2000;
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12-MAY-2000;
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                                                                                              Query Match
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(CART/)
(LISX/)
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(KALO/)
(FANG/)
(RETT/)
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                                                                                                                                                                                                                                                                                                                                                                  Human;
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(MITC/)
(HARL/)
 8888888
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                                                                                                                                                                                                                                                                The invention describes a fusion protein comprising at least one amino acid sequence of immunogenic portions of any of the 3 sequences not defined in the specification, or sequences having at least 70 or 90 % sequence identity to any one of the 35 sequences defined in the USPTO web site, which is encoded by any of the 4 nucleotide sequences not defined in the specification. The fusion protein, composition and methods are useful for diagnosing, preventing and/or treating cancer, particularly prostate cancer. The proteins are useful as markers to indicate the presence or absence of cancer. This is the amino acid sequence of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Prostate specific protein and its encoding polynucleotide, useful for the treatment and diagnosis of prostate cancer.
                                                                                                                                                              Prostate cancer; vaccine; gene therapy; cytostatic; fusion protein; immunogen; cancer; prostate specific antigen; PSA; prostatic acid phosphatase; PAP; prostate specific membrane antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kalos MD;
Carter D;
Hural J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hillon DC, Mitcham JL, Harlocker SL, Jiang Y, SK, Retter MW, Stolk JA, Day CH, Vedvick TS, Wang A, Skeiky YAW, Hepler WT, Henderson RA, PD, Houghton RL, Y De BassolsCV, Foy TM;
                                                                                                                                  Prostate cancer therapy associated peptide #15.
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                                                  ABU71693 standard; peptide; 19
                                                                                                                                                                                                                                                                                                                                               04-OCT-1999; 99US-0157455P.
04-OCT-2000; 2000US-00679272.
28-MAR-2001; 2001US-00822827.
                                                                                                                                                                                                                                                                                                                     29-JUN-2001; 2001US-00895793
                                                                                                        (first entry)
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HOUGHTON R L.
Y DE BASSOLS C V.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          JIANG Y.
KALOS M D.
FANCER G R.
STOLK J A.
BYOLK J A.
UEDVICK T S.
CARTER D.
LI S X.
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DILLON D C.
MITCHAM J L.
HARLOCKER S I
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                                                                                                                                                                                                                                   Homo sapiens.
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Li SX, Wang
Mcneill PD,
                                                                                                        10-JUN-2003
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                                                                              ABU71693;
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(DILL/)
(MITC/)
(HARL/)
(JIAN/)
(KALO/)
(FANG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (STOL/)
(DAYC/)
(VEDV/)
(CART/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (SKEI/)
(HEPL/)
(HEND/)
(HURA/)
(MCNE/)
(HOUG/)
(DBAS/)
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(WANG/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Χu J,
                        RESULT 4
                                       ABU71693
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Gaps

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0; Indels

(WANG/) (SKEI/) (HEPL/) (HEND/)

Fanger Li SX, Χu J,

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Human; prostate specific cDNA; cytostatic; immunostimulant; gene therapy; cell therapy; vaccine; T-cell epitope; class I major histocompatibility complex allele; MHC; prostate cancer; tumour; antigen presenting cell; epitope.
                        The present invention relates to novel prostate-specific proteins (PSP) and their coding sequences. The PSPs and their coding sequences are useful for stimulating an immune response in a patient, or for treating prostate cancer in a patient and for determining, detecting or diagnosing the presence of a cancer in a patient. The present sequence was used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human prostate protein P503S epitope mapping peptide #2101.
                                                                                                                                                                                  100.0%; Score 106; DB 6;
100.0%; Pred. No. 6.2e-09;
cive 0; Mismatches 0;
Example 18; Page 466; 691pp; English.
                                                                                                                                                                                                                                                                                                                                                                        ADB13954 standard; peptide; 19 AA
                                                                                                                                                                                                                                                                            1 GFTNYTDFEDSPYFKENSA 19
                                                                                                                                                                                                                                                     1 GFTNYTDFEDSPYFKENSA 19
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2001US-00780669.
2001US-00852911.
2001US-00895814.
2001US-00012896.
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980S-00020956.
980S-00135607.
980S-00159812.
990S-00232149.
990S-0028846.
990S-0038846.
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2000US-00635215.
2000US-00657279.
2000US-00679426.
2000US-00679426.
2000US-00695426.
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2000US-00570737.
2000US-00593793.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12-NOV-2002; 2002US-00294025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-00806099
                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                       Conservative
                                                                                                                      illustrate the invention
                                                                                                                                                                    Query Match
Best Local Similarity
'-ham 19; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US2003185830-A1.
                                                                                                                                                      Sequence 19 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-JUN-2000;
27-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-MAY-2002;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29-AUG-2000;
06-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14-JAN-2000;
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12-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                           18-DEC-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-OCT-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                            ADB13954;
                                                                                                                                                                                                                                                                                                                                                              ADB13954
                                                                                                                                                                                                                                                                                                                                            RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New prostate-specific proteins and genes, useful in gene therapy, particularly for stimulating an immune response in a patient, or treating prostate cancer in a patient, as well as for diagnosing prostate cancer in a patient.
                                                                                                                                                                                                                                                                                   The present invention provides prostate-specific coding sequences and their encoded proteins. These can be used in the diagnosis and treatment of cancers, particularly prostate cancer. The present sequence is a peptide described in the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Prostate tumour specific related peptide for epitope mapping SEQ ID 504.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Watanabe Y;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xu J, Dillon DC, Mitcham JL, Harlocker SL, Jiang Y, Henderson Kalos MD, Fanger GR, Retter MW, Stolk JA, Day CH, Vedvick TS; Carter D, Li SX, Wang A, Skeiky YAW, Hepler WT, Hural J; Mcneill PD, Houghton RL, Vinals Y De BassolsC, Foy TW, Watanabe
                                                                                      Kalos MD;
Carter D;
                                                                                                                                                                                      New prostate-specific polynucleotides for diagnosing and treating diseases, in particular prostate cancer, and as markers for the progression of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cytostatic, gene therapy; prostate-specific protein; PSP; human; immune response; prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                               Length 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                    Dillon DC, Mitcham JL, Harlocker SL, Jiang Y, GR, Retter MW, Stolk JA, Day CH, Vedvick TS, Wang A, Skeiky YAW, Hepler WT, Henderson RA;
                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 106; DB 5; 100.0%; Pred. No. 6.2e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                            Claim 2; SEQ ID NO 504; 87pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           09-MAY-2002; 2002WO-US014753.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-MAY-2001; 2001US-00852911.
29-JUN-2001; 2001US-00895814.
10-DEC-2001; 2001US-00012896.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 100.
Matches 19; Conservative
     WANG A.
SKEIKY Y A W.
HEPLER W T.
HENDERSON R A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2003-167130/16.
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                                                                                                                                                         WPI; 2002-255649/30.
                                                                                                                                                                                                                                                                                                                                                                                 Sequence 19 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200289747-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
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ABR54374;

RESULT 6 ABR54374

Deng T;

Query Match

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The invention relates to an isolated polypeptide comprising no more than 11-542 amino acids of ADB1353 comprising a sequence ADB1487. The peptides comprise a fragment ADB1363 of that contain naturally processed T-611-542 amino acids of ADB14853 comprising a sequence ADB1487. The peptides comprise of a fragment ADB1353 of that contain naturally processed T-611-616 and ADB14853 is a polypeptide encoded by a human prostate specific cDNA, one of 648 disclosed as new Also included are nucleic acids corcoling the proceins and peptides, expression vectors, a host cell transformed with the vector, an isolated antibody (or antigen binding fragment) that specifically binds to the procein or peptide, detecting ample with a binding agent that binds to the procein or peptide, detecting ample with a binding agent that binds to the peptides or a polypeptide to appearing as ADB1358, detecting the amount of polypeptide that binds to the agent and comparing the amount of polypeptide that binds to the apeptides or a tumour protein comprising the predetermined cut-off value to determine the presence of cancer; a tumour protein comprising T cells with the specific for a tumour protein comprising contacting T cells specific for a tumour protein comprising the presence of a cancer in a patient and treating prostate cancer in a patient acids, antibodies or compounds, determining the presence of a cancer in a patient of differentiation (CD4+) and/or CD8+ T cells isolated to combating cluster of differentiation (CD4+) and/or CD8+ T cells the profiles or antigen presenting cells expressing the nucleic acid, are used to estimilate or expanding the protein contact acids encoding the contact acids, antibodies, fusion proteins. The peptides or treat contact in a patient. The peptides or treat contact in a patient. The present esquence is an epitope or estimilate or expand T cells specific for a unmour protein. The peptides cancer in a patient. The present esquence is an epitope or presenting cells are used to stimulate an immune response or 
                                                                                                                                          New isolated polypeptide for use in a vaccine for stimulating an in response, or for treating or diagnosis cancer, preferably prostate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     segdata.uspto.gov/seguence.html?DocID=20030185830
                                                                                                                                                                                                                                               Example 18; Page; 101pp; English.
                                                 Kalos MD;
                                                                                             WPI; 2003-756193/71.
(CORI-) CORIXA CORP.
                                              Xu J, Stolk JA,
                                                                                                                                                                                                   cancer.
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Sequence 19 AA;

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Gaps
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         100.0%; Score 106; DB 7; Length 19; 100.0%; Pred. No. 6.2e-09; tive 0; Mismatches 0; Indels
                                    Conservative
Query Match
Best Local Similarity
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## GFTNYTDFEDSPYFKENSA 19 GFTNYTDFEDSPYFKENSA 19

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ADG26370 standard; peptide; 19 AA
                                26-FEB-2004
                     ADG26370;
RESULT 8
     ADG26370
          SXXXXXXXXXX
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Human prostate-specific polypeptide #43. (first entry)

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Human; prostate-specific polypeptide; prostate cancer; cytostatic.
                                                                        Homo sapiens
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2000US-00593793.
2000US-00605783.
2000US-00651236.
2000US-00657279.
2000US-00657279.
                                         97US-00904804.
98US-00020956.
98US-00115453.
98US-00159812.
99US-00232149.
                                                                               99US-00352616.
99US-00439313.
99US-00443686.
2000US-00483672.
                                                                                                     2000US-00536857.
2000US-00568100.
2000US-00570737.
                                                                                                                                                                 2001US-00759143.
2001US-00780669.
2001US-00852911.
                         09-MAY-2002; 2002US-00144678
                                                                                                                                                            2000US-00709729
                                                                                                                                                                                       2001US-00012896
                                                                                                                                                                                  2001US-00895814
    US2003157089-A1
                                                                                                                     13-JUN-2000;
                                                                                                                                09-AUG-2000;
                                                                                                                                                      10-OCT-2000;
                                                                                                                                                                                        10-DEC-2001;
                                                                                                14-JAN-2000;
                                                                                                          09-MAY-2000;
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                                                                                                                           27-JUN-2000;
                                                                                                                                      29-AUG-2000;
                                                                                                                                            06-SEP-2000;
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                                                                                                                                                                  L2-JAN-2001;
                                                                     15-JAN-1999
                                                                                13-JUL-1999
               21-AUG-2003
                                                                                                                                                                             09-MAY-2001
                                                     25-FEB-
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# (CORI-) CORIXA CORP.

Xu J, Dillon DC, Mitcham JL, Harlocker SL, Jiang Y, Henderson RA, Kalos MD, Fanger GR, Retter NW, Stolk JA, Day CH, Vedvick TS; Carter D, Li SX, Wang A, Skeiky YAW, Hepler WT, Hural J; Mcneill PD, Houghton RL, Vinals Y De BassolsC, Foy TW, Watanabe Y; Deng T; Carter D, Li Mcneill PD, Meagher MJ,

# WPI; 2003-777973/73.

New polynucleotides encoding prostate specific polypeptides isolated from a human prostate tumor cDNA library are useful to diagnose and treat cancer particularly prostate cancer.

# Example 18; SEQ ID NO 504; 99pp; English.

The invention relates to human prostate-specific polypeptides and the polynucleotides encoding them. The invention also relates to an isolated antibody or its antigen-binding fragment that specifically binds a polypeptide of the invention, a method of detecting cancer in a patient comprising contacting a biological sample of the patient with an agent that binds a prostate-specific polypeptide and comparing the amount of bound polypeptide comparted to a predetermined cut-off value and a fusion protein comprising a prostate-specific polypeptide. The sequences of the invention are used to diagnose and treat cancer, particularly prostate cancer. This sequence represents a human prostate-specific polypeptide of the invention. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format directly from USPTO at sequence.html.

# Sequence 19 AA;

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Gaps
                                       ö
100.0%; Score 106; DB 7; Length 19; 100.0%; Pred. No. 6.2e-09; ive 0; Mismatches 0; Indels
                   Best Local Similarity 100.
Matches 19; Conservative
 Query Match
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antiarteriosclerotic; anticonvulsant; nootropic; neuroprotective; cerebroprotective; anti-HIV; antiallergic; antiinflammatory; thyromimetic; cell proliferative; cancer; atherosclerosis; neurological; epilepsy; Huntington's disease; stroke; immune; inflammatory; AIDS; allergy; developmental; hypothyroidism; Cushing's syndrome; infection.
                                                                                                                       receptor and membrane-associated protein; REMAP; cytostatic;
                                                    Ā
                                                                                                       Human REMAP protein - SEQ ID 19.
                                                    ADD69590 standard; protein; 172
GFTNYTDFEDSPYFKENSA 19
                                                                                                                                                                                                                                                               15-NOV-2001; 2001US-0335274P.
14-DEC-2001; 2001US-0345542P.
18-DEC-2001; 2001US-034642P.
11-JAN-2002; 2002US-0348687P.
                                                                                                                                                                                                                                       13-NOV-2002; 2002WO-US036759.
                                                                                                                                                                                                                                                         13-NOV-2001; 2001US-0333097P
                                                                                      (first entry)
                                                                                                                                                                                                      WO2003048305-A2
                                                                                                                                                                                     Homo sapiens
                                                                                      15-JAN-2004
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                                                                      ADD69590;
                                   RESULT 9
ADD69590
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# (INCY-) INCYTE GENOMICS INC.

Duggan BM, Yang J, Gietzen KJ, Lee SY, Tang YT, Azimzai Y; Chawla NK, Warren BA, Barroso I, Bechla SD, Yue H, Lehr-Mason PM; Thangavelu K, Lee S, Emerling BM, Kable AE, Khare R, Baughn MR; Gandhi AR, Tran UK, Richardson TW, Marquis JP, Lal PG, Forsythe IJ; Lee EA, Swarnakar A, Kallick DA, Griffin JA, Ellict VS, Gorvad AE; Hafalia AJA, Ison CH, Jin P, Jiang X, Jackson AA, Bhatia U; Burrill JD, Blake JJ, Ho A, Zheng W, Gao J;

WPI; 2003-513744/48. N-PSDB; ADD69637.

New human receptors and membrane-associated proteins (REMAP), useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant REMAP expression e.g. cancer, AIDS, atherosclerosis, or infections.

claim 1; SEQ ID NO 19; 298pp; English.

The invention relates to a novel isolated polypeptide comprising a human receptor and membrane-associated protein (REMAP). The polypeptide of the invention demonstrates extostatic, antiatrefisocialerotic, antiatornulsant, nootropic, neuroprotective, cerebroprotective, anti-HIV, antiallergic, antiinflammatory and thyromimetic activities and may be useful for treating and diagnosing various disorders including those which are cell proliferative such as cancer and atherosclerosis, neurological including epilepsy, Huntington's disease and stroke, immune/inflammatory particularly AIDS and allergies and developmental such as hypothyroidism and Cushing's syndrome, as well as infections. The current sequence is that of the human REMAP protein of the invention.

Sequence 172 AA;

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                                                  Gaps
                                               .
0
Query Match
100.0%; Score 106; DB 7; Length 172;
Best Local Similarity 100.0%; Pred. No. 6.7e-08;
Matches 19; Conservative 0; Mismatches 0; Indels C
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New ovarian specific nucleic acid molecules and polypeptides useful for diagnosing, preventing or treating ovarian cancer, for producing transgenic animals or cells, or for research purposes.
                                                                                                               normal; neoplastic; ovarian; ovarian specific nucleic acid; OSNA; metastatic; cancer; vaccine; cytostatic; human.
                                                                                                  Protein of human ovarian specific gene, SEQ ID No 157.
                                                                                                                                                                                                                                                           Chen H;
                                                                                                                                                                                                                                                            Liu S,
                                                    ADP81123 standard; protein; 174 AA
        Sun Y,
                                                                                                                                                                                                    06-DEC-2002; 2002US-0431301P.
06-DEC-2002; 2002US-0431321P.
30-JUN-2003; 2003US-0484584P.
07-NOV-2003; 2003US-0518607P.
1 GFTNYTDFEDSPYFKENSA
                                                                                                                                                                                      08-DEC-2003; 2003WO-US038855.
                                                                                   (first entry)
                                                                                                                                                                                                                                                             Macina RA, Turner LR,
                                                                                                                                                                                                                                            (DIAD-) DIADEXUS INC.
                                                                                                                                                                                                                                                                           WPI; 2004-468850/44.
                                                                                                                                                                                                                                                                                    N-PSDB; ADP80988
                                                                                                                                                         WO2004053079-A2.
                                                                                                                                          Homo sapiens.
                                                                                   09-SEP-2004
                                                                                                                                                                        24-JUN-2004.
                                                                     ADP81123;
                                      RESULT 10
                                               ADP81123
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Claim 12; SEQ ID NO 157; 754pp; English

The invention relates to novel isolated nucleic acid molecules and copypeptides present in normal and neoplastic ovarian cells. These comprise a mucleic acid sequence encoding any of the 167 amino acid sequences (e.g. 438, 237 or 233 amino acids) fully defined in the captences (e.g. 438, 237 or 233 amino acids) fully defined in the captences (e.g. 438, 1894 or 1691 bp) fully defined in the specification (SEQ. ID NOS: ADP81055 to ADP81094). The invention that the precification (SEQ. ID NOS: ADP80967 to ADP81094). The invention further comprises: a method for determining the presence of a ovarian specific acid molecule; a host cell comprising the vector comprising the above nucleic acid molecule; a host cell comprising the vector comprising the above polypeptide encoded by the anucleic acid molecule; a producing a polypeptide encoded by the above mucleic acid molecule; a continuing the presence of an ovarian specific protein in a polypeptide encoded by the above polypeptide; a method for diagnosing or monitoring the presence and metastases of or ovarian cancer in a patient, the kit comprising a means for context and a patient, the kit comprising a means for context or polypeptide; a method of treating a patient with ovarian cancer; and a patient with ovarian cancer; and a context of the above polypeptides may be used to create a cytostatic activity. The isolated pulpeptides may be used to create a cytostatic activity. The isolated polypeptides may be used to create a cytostatic activity. The isolated polypeptides may be used to create a context and treating ovarian cancer. This sequence represents the protein concer and treating ovarian cancer. This sequence represents the protein concer and preating or monitoring the presence of the invention.

Sequence 174 AA;

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This invention describes novel cytostatic polynucleotide and polypeptide sequences which can be used in a method for diagnosing prostatic cancer. Or the risk of developing prostatic cancer. Diagnosis is based on determining over transcription or over expression of the sequences in prostatic tissue. Screening for inhibitors of the sequences in prostatic tissue. Screening for inhibitors of the sequences or detection substances involves a binding assay, any compounds that bind are selected, optionally after deconvolution of mixtures. Detection of a predetermined minimum level of the reporter indicates the presence of tumour cells. Inhibitors can be chosen from antisense oligonucleotides, can short-interfering RNA or riboxymes; an organic molecula of molecular weight below 5000, preferably 300, that binds to the polypeptide; an aptamer against the polypeptide; a (monoclonal) antibody (ab) against the polypeptide, and anti-idiotype, non-human (monoclonal) antibody directed against Ab or any of the above derivatised with a reporter group, cell toxin, immunostimulatory molecules and/or radioisotope. The polynucleotides are identified in human prostatic cancer by differential expression analysing waing Namicroalrays, hearted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rosenthal A, Hermann K, Pilarsky C, Specht T; G, Bruemmendorf T, Kinnemann H, Roepcke S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New nucleic acids, and encoded proteins, from prostatic cancer tissue, useful for diagnosis, treatment and in screening for specific binding
                                    Gaps
                                  ö
 Length 174;
                               Indels
                                                                                                                                                                                                                                                                                  Human prostatic carcinoma derived protein SEQ ID 190 #1.
100.0%; Score 106; DB 8; 100.0%; Pred. No. 6.8e-08;
                                                                                                                                                                                                                                                                                                                   human; cytostatic; diagnosis; prostatic cancer; differential expression analysis.
                                 Mismatches
                                                                                                                                                                                  ADR65994 standard; protein; 214 AA
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                                                              1 GFTNYTDFEDSPYFKENSA 19
                                                                                   39 GFTNYTDFEDSPYFKENSA 57
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14-MAY-2003; 2003DE-01022134.
                                                                                                                                                                                                                                                   (first entry)
               Local Similarity 100.
nes 19; Conservative
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Beckmann (
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ROSENTHAL A.
HERMANN K.
PILARSKY C.
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Xinzhong L,
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Query Match
Best Local 8
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(ROSE/)
(HERM/)
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                             Matches
                                                                                                                                                 RESULT 11
                                                                                                                                                                    ADR65994
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                                                                                            셤
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between normal and tumorous tissues, with (over) expression being detected by quantitative PCR. Analysis of prostatic cancer samples showed that CD24 was upregulated in many of them. Sections of tissue, isolated from prostatic cancer patients, or subjects at risk, were incubated

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sequentially with anti-human CD4 murine monoclonal antibodies; biotinylated second antibody; streptavidin-conjugated horseradish peroxidase and then diaminobenzidine as colour former (brown): The samples were countersteained with hemalum (blue). Malignant cells stained strongly but non-malignant cells only weakly. In 15 of 63 samples of adenocarchoma, membrane and cytoplasmic staining was very strong, and lymph node metastases were also stained. ADR6505-ADR66954 represent the polymucleotide and polypeptide sequences used in the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This invention describes novel cytostatic polynucleotide and polypeptide sequences which can be used in a method for diagnosing prostatic cancer or the risk of developing prostatic cancer. Diagnosis is based on determining over transcription or over expression of the sequences in prostatic tissue. Screening for inhibitors of the sequences or detection substances involves a binding assay, any compounds that bind are selected, optionally after deconvolution of mixtures. Detection of a predetermined minimum level of the reporter indicates the presence of tumour cells. Inhibitors can be chosen from antisense oligonucleotides, short-interfering RNA or ribozymes; an organic molecule of molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Specht T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New nucleic acids, and encoded proteins, from prostatic cancer tissue, useful for diagnosis, treatment and in screening for specific binding
                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dahl E, Rosenthal A, Hermann K, Pilarsky C, Specht
Beckmann G, Bruemmendorf T, Kinnemann H, Roepcke S;
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                                                                                                                                                                                                                   Query Match
100.0%; Score 106; DB 8; Length 214;
Best Local Similarity 100.0%; Pred. No. 8.5e-08;
Matches 19; Conservative 0; Mismatches 0; Indels (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human prostatic carcinoma derived DNA SEQ ID 190 #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human; cytostatic; diagnosis; prostatic cancer; differential expression analysis.
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                                                                                                                                                                                                                                                                                                                                                                                                                  ADR66892 standard; protein; 214 AA.
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14-MAY-2003; 2003DE-01022134.
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HERMANN K.
PILARSKY C.
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(DAHL/)
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11-APR-1997;
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    weight below 5000, preferably 300, that binds to the polypeptide; an aptamer against the polypeptide; a (monoclonal) antibody (Ab) against the polypeptide, preferably humanised or human; an anti-idiotype, non-human comparison antibody antibody directed against Ab or any of the above derivatised with a reporter group, cell toxin, immunostimulatory molecules and/or radioisotope. The polymuclectides are identified in human prostatic cancer by differential expression analysis, using DNA microarrays, between normal and tumorous tissues, with (over) expression being detected by quantitative PCR. Analysis of prostatic cancer samples showed that CD24 was upregulated in many of them. Sections of tissue, isolated from prostatic cancer patients, or subjects at risk, were incubated prostatic cancer patients, or subjects at risk, were incubated sequentially with anti-human CD4 murine monoclonal antibodies; bictinylated second antibody; streptavidin-conjugated horseradish central antibodis antibody; streptavidin-conjugated horseradish centrally but non-malignant cells only weakly. In 15 of 61 samples of atrongly but non-malignant cells only weakly. In 15 of 63 samples of adenocarcinoma, membrane and cytoplasmic staining was very strong, and lymph node metaatases were also stained. ADR66954 represent the invalidation of the invalidation of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; secreted protein; fusion protein; gene therapy; protein therapy; diagnosis; tissue; cancer; tumour; neurodegenerative disorder; leukaemia; developmental abrormality; foetal deficiency; blood; allergy; renal; immune system; asthma; lymphocytic disease; brain; hepatic; lymphoma; inflammation; ischaemic shock; Alzheimer's disease; restenosis; AlDS; cognitive disorder; schizzophrenia; prostate; obesity; osteoclast; thymus; osteoporosis; arthritis; testis; lung; thyroidtis; thyroid; digestion; endocrine; metabolism; regulation; malabsorption; gastritis; neoplasm.
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100.0%; Score 106; DB 8; Length 214;
Best Local Similarity 100.0%; Pred. No. 8.5e-08;
Matches 19; Conservative 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human secreted protein encoded by gene 4 clone HKCSR70.
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97US-0040162P.
97US-0040163P.
97US-0040334P.
97US-0040334P.
97US-0040336P.
97US-0040336P.
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(first entry)
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07-MAR-1997;
11-APR-1997;
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28-JAN-1999
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PR 11.-APR-1997; 9708-0043313P.
PR 11.-APR-1997; 9708-0043313P.
PR 11.-APR-1997; 9708-0043314P.
PR 11.-APR-1997; 9708-004356BP.
PR 11.-APR-1997; 9708-004356BP.
PR 11.-APR-1997; 9708-004356BP.
PR 11.-APR-1997; 9708-004356PP.
PR 11.-APR-1997; 9708-004356PP.
PR 11.-APR-1997; 9708-004357BP.
PR 11.-APR-1997; 9708-004357BP.
PR 11.-APR-1997; 9708-004357BP.
PR 23-MAY-1997; 9708-0043672P.
PR 23-MAY-1997; 9708-0043672P.
PR 23-MAY-1997; 9708-0047501P.
PR 23-MAY-1997; 9708-004758BP.
PR 23-MAY-1997; 9708-004763PP.
PR 23-MAY-1997; 9708-004763PP.
PR 23-MAY-1997; 9708-005663PP.
PR 23-MAY-1997; 9708
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wound; burn; incision; ulcer; age disease; osteoporosis;
periodontal disease; liver failure; catabolism; anabolism; metabolism;
food additive; preservative; secreted protein.
  head trauma; stroke; tissue regeneration; congenital defect; trauma;
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970S-0040161P.
970S-0040162P.
970S-0040133P.
970S-0040331P.
970S-00403312P.
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970S-00403312P.
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970S-0043578P.
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970S-0043588P.
970S-0043588P.
970S-0043588P.
970S-0043588P.
970S-0047581P.
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                                                                                           US2003027132-A1.
                                                                    Homo sapiens.
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L-APR-1997;
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11-APR-1997;
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    Clone detailed in the descriptor line. The gene can be used to generate fusion proteins by linking to the gene to a human immunoglobulin FC portion (e.g. AAV34145) for increasing the stability of the fused protein as compared to the human protein only. The invention relates to 70 novel genes and their fragments (nucleic acid sequences: AAV34154-V34276, amino acid sequences AAM75057-W75179) which are useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. Also, pathological conditions can be diagnosed by determining the amount of the new polypeptides in a sample or by determining the presence of mutations in the new polynucleotideds. Specific uses are described for each of the 70 polynucleotides, based on which tissues they are most highly expressed in (see AAV34154 for described uses). (Updated on 25-MAR-2003 to correct PF field.) (Updated on 25-MAR-2003 to correct
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                                                                                                                                                                                           Feng P, Young PE, Greene JM;
A, Olsen HS, Ebner R, Brewer LA;
Zeng Z, Kyaw H;
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                                                                                                                                                                                                                                                                                        New isolated human genes and the secreted polypeptides they encode useful for diagnosis and treatment of e.g. cancers, neurological disorders, immune diseases, inflammation or blood disorders.
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Bednarik DP, Endress GA, Yu G, Ni J, Feng P,
Ferrie AM, Duan Hu J, Florence KA, Olsen HS
Moore PA, Shi Y, Lafleur DW, Li Y, Zeng Z, K)
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                                                                                                                                                                                                                                                                                                                                            Claim 1; Page 281-282; 447pp; English.
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970S-0056903P
970S-0056909P
970S-0056910P
970S-0056910P
                                                                                                                                                         (HUMA-) HUMAN GENOME SCI INC.
 97US-0056889P
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Matches 19; Conservative
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N-PSDB; AAV34157.
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22-AUG-1997;
22-AUG-1997;
22-AUG-1997;
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22-AUG-1997;
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97US - 0056881P
97US - 0056882P
97US - 0056884P
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97US-0056894P.
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// NI J.

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// PERNG P.

/// YOUNG P B.

/// AN YOUNG P B.

// JAN/ DUAN R.

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// JAN/ DUAN R.

// (OLSE/) PICNENCE K A.

(OLSE/) OLSEN H S.

(EBNE/) BREWER L A.

(SHIY/) SHI Y.

ROSEN CA.
                                                                                                                                                                                                                                       RUBEN S M.
ROSEN C A.
FISCHER C L.
SOPPET D R.
CARTER K C.
BEDNARIK D R.
ENDRESS G A.
22-AUG-1997;
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Ruben SM, Rosen CA, Fischer CL, Soppet DR, Carter KC; Bednarik DR, Endress GA, Yu G, Ni J, Feng P, Young PB, Greene JM; Ferrie AM, Duan R, Hu J, Florence KA, Olsen HS, Epner R, Brewer LA;

WPI; 2003-466138/44. N-PSDB; ACD08028.

Novel isolated human secreted HODAZ50 polypeptide useful for diagnosing or treating deficiencies or disorders of the immune system, autoimmune disorders, hyperproliferative disorders, and infectious diseases.

Claim 11; Page 173; 243pp; English.

The invention describes an isolated human secreted HODAZ50 polypeptide (I) comprising a sequence at least 95% identical to a sequence selected from polypeptide fragment of any one of the 123 polypeptide sequences

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cc (PS) fully defined in the specification and having biological activity, polypeptide domain or epitope of PS, secreted form of PS, full-length polypeptide domain or epitope of PS, secreted form of PS, full-length protein of PS, or variant, allalic variant or species homologue of PS.

(I) or a polymuclectide (II) encoding (I) is useful for preventing, or ameliorating a medical condition in a mammalian subject. (I) consists of all properties or disposition in a subject. (I) is useful for identifying a binding partner which involves contacting the partner which involves contacting the partner which involves contacting the partner affects the activity of the polypeptide. (I) or (II) is useful for disposing or treating deficiencies or disorders of the immune of partner affects the activity of the polypeptide. (I) or (II) is useful for disposing or treating deficiencies or disorders, atxia telangictasia, HIV infection, wiskott-Addrich disorders, thrombocytopenia or heamoglobinuria, blood wiskott-Addrich disorders, blood platelet disorders, autoimmune disorders of addison's disease, haemolytic ansemia, rheumatoid arthritis, cardinal, addison's disease, haemolytic ansemia, rheumatoid arthritis, cardinal, deficient is glomerulomephritis, Grave, a disease), allergic reactions, cartering upone, breast, disease, allergic reactions, cartering allenges, hyperpoliferative disorders and the abdomen, bone, breast, disease, allergic reactions, corted in the abdomen, bone, breast, disease, and traum or stroke), to system diseases (e.g., spinal cord disorders, head trauma or stroke), to system disease to repair, replace or protect tissue damaged by congential or parasitic replace or protect tissue damaged by congential or defects, trauma (wounds, burns, incisions, or ulcers) age disease (e.g., spinal cord disorders) age disease (e.g., spinal cord disorders) age disease (e.g., spinal cord disorders) are defected traum or stroke the mammal section or augedy to or defected, trauma (wounds, burns, infections, or ulcers) are or decre
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The present invention describes compositions comprising peptides derived from the Wilm's tumour protein WT1 and methods for their use in treating malignant diseases. Peptides derived from both the murine and human WT1 proteins are provided. The human WT1 gene is found on chromosome 11p13, and the protein was shown to be a zinc finger transcription factor. The immunogenic peptides of the invention are particularly useful in the diagnosis and treatment of cancer and leukaemia. The present sequence is a polypeptide described in the exemplification of the invention Polypeptide comprising part of the Wilms Tumor gene product sequence is used in the diagnosis and treatment of malignant diseases e.g. leukemia and cancer associated with WTI. Disclosure; Page 223-224; 228pp; English. 

Query Match
Best Local Similarity 100.0%; Pred. No. 9.6e-08;
Matches 19; Conservative 0; Mismatches 0; Indels ( Sequence 240 AA;

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Search completed: February 5, 2005, 19:59:55 Job time : 100.508 secs

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/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
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      GenCore version 5.1.6
(c) 1993 - 2005 Compugen Ltd.
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US-09-679-426-504
US-09-679-426-504
US-09-148-545-137
US-08-148-545-137
US-08-148-114
US-09-030-607-114
US-09-352-616A-114
US-09-159-812-114
US-09-159-812-114
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US-09-685-168A-114
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US-09-270-767-61548
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Sequence 6473, Ap
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Sequence 5096, Ap
Sequence 5143, Ap
Sequence 4913, Ap
Sequence 4913, Ap
Sequence 7296, Ap
Sequence 9088, Ap
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Sequence 9117, Ap
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Sequence 23698, Ap
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Fatent No. 6329505
GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Willon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan Louise
APPLICANT: Harlocker, Susan Louise
APPLICANT: Harlocker, Gary
APPLICANT: Reed, Steven G.
APPLICANT: Ralos, Michael
APPLICANT: Ralos, Michael
APPLICANT: Ralos, Michael
APPLICANT: Solk, John
APPLICANT: Solk, John
APPLICANT: Day, Craig
TITLE OF INVENTION: OPPOSITIONS AND METHODS FOR THERAPY AND
TITLE OF INVENTION: OPPOSITIONS OF PROSTATE CANCER
FILE REPERBENCE: 21012.1427C9
CURRENT FILING DATE: 1999-11-12
NUMBER OF SEQ ID NOS: 575
SEQ ID NO 504
LENGTH: 19
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           US-09-248-796A-23971
US-09-583-110-5096
US-09-107-433-5143
US-09-248-796A-23174
US-09-513-999C-4913
US-09-513-999C-4168
US-09-949-016-9088
US-09-949-016-9088
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US-09-949-016-9088
US-09-949-016-9187
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US-09-949-016-9187
US-09-949-016-9187
US-09-948-0187
US-09-918A-4
US-08-005-002C-4
US-08-005-002C-4
US-09-134-001C-3808
US-09-248-796A-23636
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Parent No. 6220922;
GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Hitchan, Jennifer L.
APPLICANT: Harlocker, Susan L.
APPLICANT: Jiang, Yuqui
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Made in a lab
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ORGANISM: Artificial Sequence
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Length 19; Indels

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Query Match
Best Local Similarity 100.0%; Pred. No. 1.6e-09;
Matches 19; Conservative 0; Mismatches 0;
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APPLICANT: Skelky, Yasir A.W.
APPLICANT: Hepler, William
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFRENCE: 210121.427C21
CURRENT APPLICATION NUMBER: US/09/685,166A
CURRENT FILING DATE: 2000-10-10
NUMBER OF SEQ ID NOS: 898
SOFTWARE: PastSEQ for Windows Version 3.0
SEQ ID NO 504
LENTH: 19
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APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Hepler, William
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
CURRENT APPLICATION NUMBER: US/09/636,215
CURRENT FILING DATE: 2000-08-10
NUMBER OF SEQ ID NOS: 852
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 504
LENGTH: 19
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Best Local Similarity 100.0%; Pred. No. 1.6e-09;
Matches 19; Conservative 0; Mismatches 0;
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Patent No. 6630305
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APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan L.
APPLICANT: Henderson, Robert APPLICANT: Henderson, Robert APPLICANT: Ralos, Michael D.
APPLICANT: Ranger, Gary R.
APPLICANT: Retter, Marc W.
APPLICANT: Stolk, John A.
APPLICANT: Stolk, John A.
APPLICANT: Oby, Craig H.
APPLICANT: Carter, Homas S.
APPLICANT: Carter, Dayrox Carier
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US-09-685-166A-504
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; OTHER INFORMATION: Made in a lab
US-09-636-215-504
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                        Henderson, Robert A.
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ORGANISM: Artificial Sequence
                                                                                                                                               Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Artificial Sequence
                                                                          Fanger, Gary R.
Retter, Marc W.
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APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Hepler, William
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REPERENCE: 210121.427020
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Best Local Similarity 100.0%; Pred. No. 1.6e-09;
Matches 19; Conservative 0; Mismatches 0; Indels
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CURRENT APPLICATION NUMBER: US/09/679,426
CURRENT FILING DATE: 2000-10-02
NUMBER OF SEQ ID NOS: 895
SOFTWARE: FASESEQ for Windows Version 3.0
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Patent No. 6800746
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Henderson, Robert A.
Kalos, Michael D.
Fanger, Gary R.
Retter, Marc W.
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Kalos, Michael D.
Fanger, Gary R.
Retter, Marc W.
Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
Li, Samuel
                                                                                                                                                                                                   Xu, Jiangchun
Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
1 GFTNYTDFEDSPYFKENSA 19
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APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan L.
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Vedvick, Thomas S.
Carter, Darrick
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                                                                                                                                                                                                                                                                                Jiang, Yuqui
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US-09-759-143-504
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APPLICANT:
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Li, Samuel

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                    APPLICANT: Wang, Aijun
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Skeiky, Yasir A.W.
APPLICANT: Hepler, William
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REPERENCE: 21012.1.427023
CURRENT APPLICATION NUMBER: US/09/759,143
CURRENT FILING DATE: 2001-01-12
NUMBER OF SEQ ID NOS: 934
SOFTWARE: PRELSEQ for Windows Version 3.0
LENGTH: 19
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CURRENT APPLICATION NUMBER: US/09/651,236
CURRENT FILING DATE: 2000-08-29
NUMBER OF SEQ ID NOS: 865
SOFTWARE: FASELSEQ FOR Windows Version 3.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
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100.0%; Score 106; DB 4;
Best Local Similarity 100.0%; Pred. No. 1.6e-09;
Matches 19; Conservative 0; Mismatches 0;
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Patent No. 6818751
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Made in a lab
US-09-759-143-504
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US-09-651-236-504
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Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
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Henderson, Robert A.
Kalos, Michael D.
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ORGANISM: Artificial Sequence
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Hepler, William
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Vedvick, Thomas S.
Carter, Darrick
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Retter, Marc W.
Stolk, John A.
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Best Local Similarity
Matches 19; Conserv
APPLICANT:
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TITLE OF INVENTION: 70 Human Secreted Proteins
FILE REFERENCE: PZOOLFI
CURRENT FILING DATE: 1998-09-04
EARLIER APPLICATION NUMBER: PCT/US98/04482
EARLIER APPLICATION NUMBER: PCT/US98/04482
EARLIER APPLICATION NUMBER: PCT/US98/0406
EARLIER FILING DATE: 1998-03-06
EARLIER FILING DATE: 1997-03-07
EARLIER FILING DATE: 1997-03-07
EARLIER FILING DATE: 1997-03-07
                                                                                                                                                                                                                                                                                                                               FILING DATE: 1997-03-07
APPLICATION NUMBER: 60/038,621
FILING DATE: 1997-03-07
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APPLICATION NUMBER: 60/040,336
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FILING DATE: 1997-05-23
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APPLICATION NUMBER: 60/047,502
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APPLICATION NUMBER: 60/047,503
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/047,587
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Sequence 137, Application US/09148545 Patent No. 6590075
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APPLICATION NUMBER: 60/
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EARLIER PLING DATE: 1997-04-11
EARLIER PLING DATE: 1997-06-05
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Gaps
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Best Local Similarity 100.0%; Pred. No. 2.5e-08; Matches 19; Conservative 0; Mismatches 0;
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EARLIER APPLICATION NUMBER: 60/056,862
EARLIER FILING DATE: 1997-08-22
EARLIER FILING DATE: 1997-06-66
EARLIER APPLICATION NUMBER: 60/048,964
EARLIER APPLICATION NUMBER: 60/046,964
EARLIER APPLICATION NUMBER: 60/057,650
EARLIER FILING DATE: 1997-09-05
EARLIER FILING DATE: 1997-09-05
EARLIER FILING DATE: 1997-08-05
EARLIER FILING DATE: 1997-08-05
EARLIER FILING DATE: 1997-08-22
NUMBER OF SEQ ID NOS: 280
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EARLIER FILING DATE: 1997-05-23
EARLIER FILING DATE: 1997-04-11
EARLIER FILING DATE: 1997-04-11
EARLIER FILING DATE: 1997-04-11
EARLIER APPLICATION NUMBER: 60/047, 501
EARLIER FILING DATE: 1997-05-23
EARLIER FILING DATE: 1997-05-05
EARLIER FILING DATE: 1997-04-11
EARLIER FILING DATE: 1997-04-11
EARLIER APPLICATION NUMBER: 60/043, 670
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R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,876
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,881
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,999
                              R APPLICATION NUMBER: 60/047,588
R PILING DATE: 1997-05-23
R RAPLICATION NUMBER: 60/047,585
R FILING DATE: 1997-05-23
R APPLICATION NUMBER: 60/047,586
R FILING DATE: 1997-05-23
R APPLICATION NUMBER: 60/047,590
R FILING DATE: 1997-05-23
R APPLICATION NUMBER: 60/047,590
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APPLICATION NUMBER: 60/056,632
FILING DATE: 1997-08-22
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APPLICATION NUMBER: 60/056,875
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APPLICATION WUMBER: 60/047,589
FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,593
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APPLICATION NUMBER: 60/047,614
FILING DATE: 1997-05-23
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US-08-808-148-1
Sequence 1, Application US/08808148
Patent No. 6020478
GENERAL INPORMATION:
APPLICANT: Hillman, Jennifer
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ILING DATE: 1997-05-23
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SEQ ID NO 137
LENGTH: 233
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US-09-030-607-114
Sequence 114, Application US/09030607
Fatent No. 6262245
APENTRAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
TITLE OF INVENTION: COMPOUNDS FOR IMMUNOTHERAPY OF PROSTATE CANCER AND METHODS FO
NUMBER OF SEQUENCES: 224
CORRESPONDENCE ADDRESS:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/030,607
FILING DATE: 25-FEB-1998
CLASSIFICATION:
ATTONEY/AGENT INFORMATION:
NAME: MAIL, DAVIG J.
REGISTRATION NUMBER: 31,392
REGISTRATION NUMBER: 31,392
RELEFANCE/POCKET NUMBER: 210121.427C3
TELEFANCE/LOCKET NUMBER: 210121.427C3
TELEFANCE (206) 622-4900
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STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
                                                                                      ATTORNEY AGENT INFORMATION:
NAME: Maki, David J.
REGISTRATION NUMBER: 31,392
REFERENCE FOOKET NUMBER: 210121.427C2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 622-4900
TELEPHONE: (206) 622-4900
INFORMATION FOR SEQ ID NO: 114:
SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
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FILING DATE: 09/020,956
CLASSIFICATION:
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Best Local Similarity 100.0%;
Matches 19; Conservative
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STRANDEDNESS: si
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Fatent No. 6261562

GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
APPLICANT: Dillin, Davin C.
TITLE OF INVENTION: COMPOUNDS FOR IMMUNOTHERAPY OF PROSTATE CANCER AND METHODS FO
NUMBER OF SEQUENCES: 178
CORRESPONDENCE ADDRESS:
ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STATE: WA
COUNTRY: USA
COUNTRY: USA
COUNTRY: USA
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: Date Floppy disk
COMPUTER: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 106; DB 3; Length 241;
Pred. No. 2.6e-08;
                                      APPLICANT: Zhang, Hong Wolfe
TITLE OF INVENTION: NOVEL HUMAN TUMOR-ASSOCIATED ANTIGEN
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Incyte Pharmaceuticals, Inc.
STREET: 3174 Forter Drive
CITY: Palo Alto
STATE: CA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                       ZOUNTIER READABLE FORM:

MEDIUM TYPE: Diskette COMPUTER: Diskette COMPUTER: Diskette COMPUTER: Diskette COMPUTER: Diskette COMPUTER: DM SYSTEM: DOS SOFTWARE: FASESO for Windows Version 2.0 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/808,148
FILING DATE: Herewith CLASSIFICATION DATA: APPLICATION DATA: APPLICATION DATA: APPLICATION DATA: APPLICATION NUMBER: FILING DATE: ATTORNEY/AGENT INFORMATION: NAME: Billings, Lucy J. REGISTRATION NUMBER: B. REGISTRATION NUMBER: PF-0218 US TELECOMMUNICATION INFORMATION: WENTELECOMMUNICATION INFORMATION: WENTELECOMMUNICATION INFORMATION: WENTELECOMMUNICATION INFORMATION:
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INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 241 amino acids
TYPE: amino acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 415-855-0555
TELEFAX: 415-845-4166
                   Goli, Surya
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CLONE: 2187263
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US-09-232-149A-114
; Sequence 114, Application US/09232149A
; Patent No. 6465611
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Best Local 19, Conservative
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Best Local Similarity 100.
Matches 19; Conservative
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ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
CORGANISM: Homo sapien
US-09-232-149A-114
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US-09-636-215-114
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                                            Gaps
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APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
APPLICANT: Mitcham, Jennifer Lynn
APPLICANT: Mitcham, Jennifer Lynn
TITLE OF INVENTION: OF PROSTATE CANCER AND METHODS FOR THEIR USE
FILE REPERENCE: 210121.42708/09/352,616A
CURRENT APPLICATION NUMBER: US/09/352,616A
NUMBER OF SEQ ID NOS: 472
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 114
LENGTH: 241
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APPLICANT: Kalos, Michael
APPLICANT: Rales, Michael
APPLICANT: Retter, Mark
APPLICANT: Retter, Mark
APPLICANT: Solk, John
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSITITE CANCER
FILE REFERENCE: 210121.427C9
CURRENT FILING DATE: 1999-11-12
NUMBER OF SEQ ID NOS: 575
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 114
TENNI 241
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100.0%; Score 106; DB 3; Length 241;
Best Local Similarity 100.0%; Pred. No. 2.6e-08;
Matches 19; Conservative 0; Mismatches 0; Indels
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    Length 241;
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Query Match
100.0%; Score 106; DB 3;
Best Local Similarity 100.0%; Pred. No. 2.6e-08;
Matches 19; Conservative 0; Mismatches 0;
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                                                                                                                                                                                     RESULT 11
US-09-439-313-114
; Sequence 114, Application US/09439313
; Patent No. 6329505
                                                                                                                                                                                                                                                                                       APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan Louise
APPLICANT: Jiang Yuqui
APPLICANT: Reed, Steven G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Dillon, Davin C.
APPLICANT: Harlocker, Susan Louise
APPLICANT: Jiang, Yuqui
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ORGANISM: Homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: Homo sapien
US-09-439-313-114
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Best Local Similarity
Matches 19; Conser
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US-09-352-616A-114
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Sequence 114, Application US/09159812A

GENERAL INFORMATION:

APPLICANT: Xu, Jangehun

APPLICANT: Dillon, Davin C.

TITLE OF INVENTION: COMPOUNDS FOR IMMUNOTHERAPY OF

TITLE OF INVENTION: REOSTATE CANCER AND METHODS FOR THEIR USE

TITLE REFERENCE: 210121.4286

FILE REFERENCE: 210121.4286

CURRENT FILING DATE: 1998-09-23

NUMBER OF SEQ ID NOS: 306

SOFTWARE: FastSEQ for Windows Version 3.0

SEQ ID NO 114

LENGTH: 241
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GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
APPLICANT: Daillon, Davin
TAPLICANT: Mitcham, Jennifer Lynn
APPLICANT: Mitcham, Jennifer Lynn
TITLE OF INVENTION: COMPOUNDS FOR IMMUNOTHERAPY OF PROSTATE
TITLE OF INVENTION: CANCER AND METHODS FOR THEIR USE
FILE REFERENCE: 210121.427C6
CURRENT APPLICATION NUMBER: US/09/232,149A
CURRENT FILING DATE: 1999-01-15
NUMBER OF SEQ ID NOS: 338
SOFTWARE: FARESEQ for Windows Version 3.0
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Pred. No. 2.6e-08;
; Mismatches 0; Indels
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Dillon, Davin C.
Mitcham, Jennifer L.
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APPLICANT:
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### APPLICANT: Harlocker, Susan L.

### APPLICANT: Jiang, Yuqui
### APPLICANT: Kalos, Michael D.

### APPLICANT: Ralos, Michael D.

### APPLICANT: Ralos, Michael D.

### APPLICANT: Reter, John A.

### APPLICANT: Stolk, John A.

### APPLICANT: Stolk, John A.

### APPLICANT: Carter, Darrick
### APPLICANT: Skeiky, Yasir A.W.

### APPLICANT: Skeiky,
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Search completed: February 5, 2005, 20:07:13 Job time: 25.1525 sece

151 GFTNYTDFEDSPYFKENSA 169

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1 GFTNYTDFEDSPYFKENSA 19

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February 5, 2005, 20:00:18; Search time 71.1695 Seconds (without alignments) 86.952 Million cell updates/sec
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| Cgn12_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:+
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/cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:
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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries
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1 GFTNYTDFEDSPYFKENSA 19
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
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Perfect score:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

	Description	Sequence 504, App		Sequence 504, App	Sequence 137, App	Sequence 137, App	Sequence 1489, Ap	Sequence 114, App						
	OI.	US-09-759-143-504	US-09-780-669-504	US-09-822-827-504	US-09-895-793-504	US-09-895-814-504	US-10-012-896-504	US-10-010-940-504	US-10-144-678A-504	US-10-294-025-504	US-09-981-876-137	US-09-148-545-137	US-10-264-237-1489	US-09-759-143-114
	Query Match Length DB	19 9	19 9	19 9	19 9	19 9	19 13	19 14	19 14	19 14	233 9	233 10	240 15	241 9
de	Query Match L	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Score	106	106	106	106	106	106	106	106	106	106	106	106	106
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Sequence Sequence Sequence	Sequence	Sequence	Seguence	Sequence	Sequence	Sequence	Seguence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence	Seguence	Sequence	Sequence	Sequence	Seguence	Seguence	Sequence	Sequence	Seguence	Sequence
US-09-780-669-114 US-09-030-606-114 US-09-822-827-114	US-09-115-453-114 US-09-232-880-114	-908-193-4	US-09-895-793-114	US-09-895-814-114	US-10-012-896-114	118-10-09/-340-326	US-10-205-823-425	US-10-144-678A-114	US-10-294-025-114	US-10-295-027-604	US-10-037-417-77	US-10-037-417-78	US-10-688-838-114	US-10-097-340-324	US-10-205-823-423	US-10-156-136-20	US-09-978-360A-735	US-10-319-763-129	US-10-319-763-223	US-09-978-360A-555	US-09-908-193-43	US-09-823-187-74	US-10-037-417-76	US-10-037-417-22	US-09-864-761-44604	US-10-156-136-37	US-10-369-493-20475
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106 106 106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	106	87	87	87	87	9	9	9	9	51	51	20
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### ALIGNMENTS

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US-19-759-143-504

US-19-759-143-504

Sequence 504, Application US/09759143

Patent No. US20202248A1

GENERAL INFORMATION:
APPLICANT: Xu, Jangchun

APPLICANT: Mitcham, Jennifer L.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan L.
APPLICANT: Harlocker, Susan L.
APPLICANT: Harlocker, Susan L.
APPLICANT: Harlocker, Gener A.
APPLICANT: Ralos, Michael D.
APPLICANT: Ranger, Gary R.
APPLICANT: Ranger, Gary R.
APPLICANT: Stolk, John A.
APPLICANT: Stolk, John A.
APPLICANT: Stolk, John A.
APPLICANT: Stolk, James S.
APPLICANT: Stolk, James S.
APPLICANT: Wang, Aijun
APPLICANT: Wang, Aijun
APPLICANT: Hepler, Williams S.
APPLICANT: Hepler, Williams S.
APPLICANT: Hepler, Williams S.
APPLICANT: Hepler, Williams S.
APPLICANT: Branger, Williams S.
APPLICANT: Hepler, Mil
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Gaps

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APPLICANT: Fanger, Gary R.

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER FILE REFERENCE: 210121.534C2
CURRENT APPLICATION NUMBER: US/09/895,793
CURRENT FILING DATE: 2001-06-29
NUMBER OF SEQ ID NOS: 982
SEC ID NO 504
LENGTH: 19
                                                                                                                                              Length 19;
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100.0%; Score 106; DB 9;
Best Local Similarity 100.0%; Pred. No. 3.4e-09;
Matches 19; Conservative 0; Mismatches 0;
                                                                                                                                              Query Match 100.0%; Score 106; DB 9; Best Local Similarity 100.0%; Pred. No. 3.4e-09; Matches 19; Conservative 0; Mismatches 0;
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Houghton, Raymond L.
Vinals de Bassols, Carlota
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; Sequence 504, Application US/09895814
; Publication No. US20020193296A1
; PENERAL INFORMATION:
; APPLICANT: Xu, Jiangchun
                                                                                                                                                                                                                                                                                                                                                                                   Sequence 504, Application US/09895793 Publication No. US20020192763A1 GENERAL INFORMATION:
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US-09-895-793-504
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                                                                               CTHER INFORMATION: Made in a lab
US-09-822-827-504
                                                                                                                                                                                                                                    1 GFTNYTDFEDSPYFKENSA 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan L.
APPLICANT: Jiang, Yuqiu
APPLICANT: Kalos, Michael D.
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Hepler, William T.
Henderson, Robert A.
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Stolk, John A.
Day, Craigh H.
Vedvick, Thomas S.
Carter, Darrick
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                    TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
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LENGTH: 19
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APPLICANT: MCNeill, Patricia D.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFERENCE: 210121.427C24
CURRENT APPLICATION NUMBER: US/09/780,669
CURRENT FILING DATE: 2001-02-09
NUMBER OF SEQ ID NOS: 943
SOFTWARE: FastSEQ for Windows Version 3.0
LENGTH: 19
LENGTH: 19
                                                                   Gaps
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TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFRENCE: 210.12.534C1
CURRENT APPLICATION NUMBER: US/09/822,827
CURRENT FILING DATE: 2001-03-28
NUMBER OF SEQ ID NOS: 982
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 504
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100.0%; Pred. No. 3.4e-09;
tive 0; Mismatches 0;
                      Query Match

100.0%; Score 106; DB 9;
Best Local Similarity 100.0%; Pred. No. 3.4e-09;
Matches 19; Conservative 0; Mismatches 0;
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Parent No. US20020081680A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                               Sequence 504, Application US/09780669 Patent No. US20020051977A1
                                                                                                                                                                                                                                                                                                                        Xu, Jiangchun
Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
Jiang, Yuqui
Henderson, Robert A.
Kalos, Michael D.
Fanger, Gary R.
Retter, Marc W.
Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
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US-09-780-669-504
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                                                                                                              1 GFTNYTDFEDSPYFKENSA 19
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ORGANISM: Artificial Sequence
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Best Local Similarity 100.0
Matches 19; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , Samuel
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APPLICANT

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APPLICANT: Meagher, Madeleine Joy
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
PILE REFERENCE: 210121.427C27
CURRENT APPLICATION NUMBER: US/10/012,896
CURRENT FILING DATE: 2001-12-10
NUMBER OF SEQ ID NOS: 1011
SEQ ID NOS: 1011
SEQ ID NOS: 104
LENGTH: 19
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APPLICANT: Fanger, Gary
APPLICANT: Retter, Mark
APPLICANT: Bolk, John
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THERAPY AND
TITLE OF INVENTION: COMPOSITIONS OF PROSTATE CANCER
FILE REFERENCE: 210121.42703
CURRENT APPLICANTON NUMBER: US/10/010,940
CURRENT FILING DATE: 2001-12-05
NUMBER OF SEQ ID NOS: 575
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 504
LENGTH: 19
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100.0%; Pred. No. 3.4e-09;
tive 0; Mismatches 0;
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APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan Louise
APPLICANT: Jiang Yuqui
APPLICANT: Reed, Steven G.
APPLICANT: Kalos, Michael
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Sequence 504, Application US/10144678A
Polication No. US20030157089A1
GENERAL INFORMATION:
APPLICANT: W. Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; Sequence 504, Application US/10010940; Publication No. US20030088062A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                 CTHER INFORMATION: Made in a lab
US-10-012-896-504
                                                                                                                                                                                                                                                                                                                                                                                                                                       1 GFTNYTDFEDSPYFKENSA 19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: Made in a lab US-10-010-940-504
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                                                                                                                                                                                                                    TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
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Best Local Similarity 100.0
Matches 19; Conservative
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Best Local Similarity
Matches 19; Conserv
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TITLE OF INVENTION: COMFOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER FILE REPERENCE: 210121.427C26
CURRENT APPLICATION NUMBER: US/09/895,814
CURRENT FILING DATE: 2001-06-29
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100.0%; Score 106; DB 9;
Best Local Similarity 100.0%; Pred. No. 3.4e-09;
Matches 19; Conservative 0; Mismatches 0;
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SOFTWARE: FastSEQ for Windows Version 3.0
SEQ 1D NO 504
LENGTH: 19
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McNeill, Patricia D.
Houghton, Raymond L.
Vinals de Bassols, Carlota
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Houghton, Raymond L.
Vinals de Bassols, Carlota
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Publication No. US20020183251A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Xu, Jiangchun APPLICANT: Dillon, Davin C. APPLICANT: Mitcham, Jennifer L. APPLICANT: Mitcham, Jennifer L. APPLICANT: Harlocker, Susan L. APPLICANT: Kalos, Michael D. APPLICANT: Retter, Marc W. APPLICANT: Retter, Marc W. APPLICANT: Boy, Craig H. APPLICANT: Usy Craig H. APPLICANT: Vedvick, Thomas S. APPLICANT: Carter, Daxzick
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US-09-895-814-504
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Skeiky, Yasir A.W.
Hepler, William T.
Henderson, Robert A.
                    Mitcham, Jennifer L.
Harlocker, Susan L.
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Wantanabe, Yoshihiro
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Hepler, William T.
Henderson, Robert A.
                                                                                                                                               Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
Li, Samuel X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT
ORGANISM: Artificial Sequence
                                                                Jiang, Yuqiu
Kalos, Michael D.
Retter, Marc W.
Stolk, John A.
  Dillon, Davin C.
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APPLICANT

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TITLE OF INVENTION: 70 Human Secreted Proteins FILE REPRESENCE: PSOOLPI CURRENT APPLICATION NUMBER: US/09/981,876 CURRENT APPLICATION NUMBER: US/09/981,876 CURRENT PILING DATE: 2001-10-19 PRIOR APPLICATION NUMBER: 09/144,545 PRIOR APPLICATION NUMBER: 09/04,162 PRIOR FILING DATE: 1998-09-04 PRIOR FILING DATE: 1997-03-07 PRIOR FILING DATE: 1997-03-07 PRIOR APPLICATION NUMBER: 60/040,161 PRIOR APPLICATION NUMBER: 60/040,161 PRIOR PILING DATE: 1997-03-07 PRIOR PILING DATE: 1997-05-23 P
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PRIOR FILING DATE: 1997-05-23
PRIOR FILING DATE: 1997-05-23
PRIOR FILING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: 60/047,492
PRIOR APPLICATION NUMBER: 60/047,492
PRIOR PILING DATE: 1997-05-23
PRIOR FILING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: 60/047,598
PRIOR FILING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: 60/047,613
PRIOR FILING DATE: 1997-05-23
PRIOR FILING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: 60/047,613
PRIOR FILING DATE: 1997-05-23
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FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,503
FILING DATE: 1997-05-23
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APPLICATION WUMBER: 60/047,584
ELING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,500
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FILING DATE: 1997-05-23
FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,617
FILING DATE: 1997-05-23
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FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,581
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                                                                                                                                                                                  Sequence 137, Application US/09981876
Patent No. US20020164669A1
GENERAL INFORMATION:
1 GFTNYTDFEDSPYFKENSA 19
                                                                                                                                                                 US-09-981-876-137
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; Bequence 504, Application US/10294025
; Publication No. US20030185830A1
; GENERAL INFORMATION:
    APPLICANT: Xt, Jiangchun
; APPLICANT: Stolk, John A.
    TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
    TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
    FILE REFERENCE: 210121.427C29
; CURRENT APPLICATION NUMBER: US/10/294,025
; CURRENT FILING DATE: 2002-11-12
; SOFTHARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 504
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TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REPERBENCE: 210121.427C28
CURRENT APPLICATION UNMBER: US/10/144,678A
CURRENT FILING DATE: 2002-08-12
NUMBER OF SEQ ID NOS: 1033
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 504
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Best Local Similarity 100.0%; Pred. No. 3.4e-09;
Matches 19; Conservative 0; Mismatches 0; Indels
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100.0%; Score 106; DB 14; Length 19;
Best Local Similarity 100.0%; Pred. No. 3.4e-09;
Matches 19; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MCNeil, Patricia D.
Houghton, Raymond L.
Vinalg y de Bassols, Carlota
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTHER INFORMATION: Made in a lab
US-10-144-678A-504
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                                               Jiang, Yuqiu
Henderson, Robert A.
Kalos, Michael D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Foy, Teresa M.
Watanabe, Yoshihiro
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ORGANISM: Artificial Sequence
                                                                                                                                             Fanger, Gary R.
Retter, Marc W.
Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
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Skeiky, Yasir A. W.
Hepler, William T.
                    Harlocker, Susan L.
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                      , Samuel X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         John
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1 GFTNYTDFEDSPYFKENSA 19

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APPLICATION NUMBER: 60/056,892

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R APPLICATION UNDBER: 60/056,889

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,893

R RELING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,630

R RILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,878

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,872

R APPLICATION NUMBER: 60/056,872

R APPLICATION NUMBER: 60/056,872

R APPLICATION NUMBER: 60/056,882

R APPLICATION NUMBER: 60/056,882

R RILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,889

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,893

R PILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,894

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,894

R PILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,894

R PILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,910

R PILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,910

R PILING DATE: 1997-08-22

R PILING DATE: 1
                                                                              R APPLICATION NUMBER: 60/043,580
R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,568
R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,314
R FILING DATE: 1997-04-11
                                                                                                                                                                                                                          R APPLICATION NUMBER: 60/043,569
R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,311
RR APPLICATION NUMBER: 60/043,671
RR APPLICATION NUMBER: 60/043,671
RR APPLICATION NUMBER: 60/043,674
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R APPLICATION NUMBER: 60/043,669
R FILING DATE: 1997-04-11
R PILING DATE: 1997-04-11
R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,313
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R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/048,974
R FILING DATE: 1997-06-06
R APPLICATION NUMBER: 60/056,886
R FILING DATE: 1997-08-22
FILING DATE: 1997-05-23
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APPLICATION NUMBER: 60/043,672
FILING DATE: 1997-04-11
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APPLICATION NUMBER: 60/056,845
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APPLICATION NUMBER: 60/056,631
                                                               LING DATE: 1997-05,-23
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                                PRIOR
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Best Local Similarity 100.0%; Pred. No. 4.9e-08;
Matches 19; Conservative 0; Mismatches 0;
                                                PRIOR PLING DATE: 1997-05-23
PRIOR PLING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: 60/047, 599
PRIOR PLING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: 60/047, 586
PRIOR APPLICATION NUMBER: 60/047, 586
PRIOR PLING DATE: 1997-05-23
PRIOR PLING DATE: 1997-05-23
PRIOR PLING DATE: 1997-05-23
PRIOR PLING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: 60/047, 599
PRIOR PLING DATE: 1997-05-23
PRIOR APPLICATION NUMBER: 60/047, 599
PRIOR PLING DATE: 1997-05-23
PRIOR PLING DATE: 1997-04-11
PRIOR PLING DATE: 1997-04-11
PRIOR PLING DATE: 1997-05-23
PRIOR PLING DATE: 1997-04-11
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PRIOR APPLICATION NUMBER: 60/056,881
PRIOR FILING DATE: 1997-08-22
PRIOR PELICATION NUMBER: 60/056,909
PRIOR FILING DATE: 1997-08-22
PRIOR PELING DATE: 1997-08-22
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PRIOR PELING DATE: 1997-08-22
PRIOR PELING DATE: 1997-06-06
PRIOR APPLICATION NUMBER: 60/057,650
PRIOR PILING DATE: 1997-09-05
PRIOR PELING DATE: 1997-09-05
PRIOR PELING DATE: 1997-09-05
PRIOR FILING DATE: 1997-09-22
NUMBER OF SEQ ID NOS: 280
SOFTWARE: PATENTIN Ver. 2.0
SEQ ID NO 137
LENGTH: 233
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US-09-148-545-137
; Sequence 137, Application US/09148545
FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/047,595
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FILING DATE: 1997-08-22

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TITLE OF INVENTION: TO HUMAN SCENETIAL
CURRENT APPLICANTION WURBER: US/09/146.545
CURRENT APPLICANTION WURBER: US/09/146.545
CURRENT APPLICANTION WURBER: 05-04
BARLIER PILING DATE: 1999-03-06
BARLIER PILING DATE: 1997-03-07
BARLIER PILING DATE: 1997-03-
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EARLIER APPLICATION NUMBER: 60/045, 548
EARLIER APPLICATION NUMBER: 60/045, 569
EARLIER FILING DATE: 1997-04-11
EARLIER FILING DATE: 1997-06-11
EARLIER FILING DATE: 1997-06-22
EARLIER PILING DATE: 1997-06-22
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APPLICANT: Hepler, William
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFERENCE: 210.11.427.02
CURRENT APPLICATION NUMBER: US/09/759,143
CURRENT FILING DATE: 2001-01-12
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Pred. No. 5.1e-08;
; Mismatches 0;
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100.0%; Pred. No. 5.1e-08;
tive 0; Mismatches 0;
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PRIOR APPLICATION NUMBER: PCT/USO1/16450
PRIOR FILING DATE: 2001-05-18
PRIOR APPLICATION NUMBER: US 60/205,515
PRIOR FILING DATE: 2000-05-19
NUMBER OF SEQ ID NOS: 2876
SOFTWARE: Patentin Ver. 3.1
SEQ ID NO 1489
LENGTH: 240
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Patent No. US20020022248A1
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Patent No. US20020051977A1
GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     150 GFTNYTDFEDSPYFKENSA 168
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Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
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Kalos, Michael D.
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Best Local Similarity 100.0%;
Matches 19; Conservative 0
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Vedvick, Thomas S.
Carter, Darrick
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Best Local Similarity 100.(
Matches 19; Conservative
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Retter, Marc W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jiang, Yuqui
                                                                                                                                                                                                                                                             ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-264-237-1489
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ORGANISM: Homo sapien
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SOFTWARE: FastSEQ for
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-759-143-114
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US-09-780-669-114
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LENGTH: 241
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Publication No. US20040009491A1
GENERAL INFORMATION:
APPLICANT: Birse et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies FILE REFERENCE: PAISIPL
CURRENT APPLICATION NUMBER: US/10/264,237
CURRENT FILING DATE: 2002-10-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
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4.9e-08;
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100.0%; Pred. No. 4.9
:ive 0; Mismatches
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EARLIER PELICATION NUMBER: 60/048,964
EARLIER FILING DATE: 1997-06-06
EARLIER APPLICATION NUMBER: 60/057,650
EARLIER FILING DATE: 1997-09-05
EARLIER FILING DATE: 1997-08-22
NUMBER: 0F SEQ ID NOS: 280
                                                                                                               R FILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,596

R FILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,590

R FILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,594

R RILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,599

R FILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,514

R FILING DATE: 1997-04-11

R R FILING DATE: 1997-04-11

R R FILING DATE: 1997-04-11

R R FILING DATE: 1997-04-11

RR R FILING DATE: 1997-04-11
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R APPLICATION NUMBER: 60/056,876

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,981

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,909

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,875

R PILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,875

R PILING DATE: 1997-08-22
                                ATION NUMBER: 60/047,588
                                                           FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PILING DATE: 1997-08-22
APPLICATION WUMBER: 60/056,887
ELING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,908
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SEQ ID NO 137
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Best Local Similarity 100.
Matches 19; Conservative
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US-10-264-237-1489
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Gaps

Length 241; Indels

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Query Match
Best Local Similarity 100.0%; Pred. No. 5.1e-08;
Matches 19; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                            Search completed: February 5, 2005, 20:11:30 Job time: 71.1695 secs
                                                                                                                                                                                                                                                                                                                                    151 GFTNYTDFEDSPYFKENSA 169
                                                                                                                                                                                                                                                                                          1 GFTNYTDFEDSPYFKENSA 19
LENGTH: 241 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                   TOPOLOGY: linear
MOLECULE TYPE: protein
ORIGINAL SOURCE:
CRGANISM: Homo sapiens
US-09-030-606-114
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Sequence 114, Application US/09030606

Patent NO. US20020081580A1

GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Xu, Jiangchun
TITLE OF INVENTION: COMPOUNDS FOR IMMUNODIAGNOSIS OF PROSTATE CANCER AND METHODS INVERSPONDENCE ADDRESS: 224
CORRESPONDENCE ADDRESSE: SEED and BERRY LLP
STREET: 6300 Columbia Center, 701 Fifth Avenue
CITY: Seattle
STREET: WA
COUNTRY: USA
COUNTRY: USA
COUNTRY: USA
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                                                                                                                   Skeik, Yasir A.W.

Skeik, Yasir A.W.

Milliam

APPLICANT: Hural, John

APPLICANT: McNeill, Patricia D.

APPLICANT: McNeill, Patricia D.

TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER

FILE REFERENCE: 210121.427024

CURRENT APPLICATION NUMBER: US/09/780,669

CURRENT PILING DATE: 2001-02-09

NUMBER OF EGG ID NOS: 943

SOFTWARE: FastSEQ for Windows T.

LENGTH: 241

TYPE: PPT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 100.0%; Score 106; DB 9; Length 241;
Best Local Similarity 100.0%; Pred. No. 5.1e-08;
Matches 19; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPPRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/030,606
FLING DATE: 25-FEB-1998
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: MAIL, DAVIG J.
REGISTRATION NUMBER: 31,392
REGISTRATION NUMBER: 31,392
REGISTRATION INFORMATION:
TELEFONGE (206) 622-4900
TELEFAK: (206) 622-4900
TELEFAK: (206) 622-4900
TELEFAK: (206) 622-631
INFORMATION FOR SEQ ID NO: 114:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 GFTNYTDFEDSPYFKENSA 19
                                                     Henderson, Robert A. (alos, Michael D.
             Harlocker, Susan L.
                                                                                                 Fanger, Gary R. Setter, Marc W. Scolk, John A. Day, Craig H. Gedrick, Thomas S. Carter, Darrick Li, Samuel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-030-606-114
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Mon Feb

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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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- protein search, using sw model OM protein

5, 2005, 19:49:45; Search time 18.678 Seconds (without alignments) 97.876 Million cell updates/sec February Run on:

US-09-780-669-114\_COPY\_151\_169 Title: Perfect score:

1 GFTNYTDFEDSPYFKENSA 19 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283416 segs, 96216763 residues Searched:

283416 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

PIR 79:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES	Description	62 tetraspan TSPAN-1		tetrasi			hypothetica																Ig heavy chai	-		24 hypothetical prote	hypothetical		79 probable transcrip
S	Ω	A59262	I39368	A59264	E88487	RGXLA	AE2960	A98323	AB2078	H97714	T38260	B84139	D95103	B97971	I40325	AD1787	D84221	T44652	C85349	T08551	T23979	T23986	826932	I38016	A59258	T27424	T37944	F83725	A71079
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* Ouerv	- !	100.0	48.1	46.2	43.9	43.4	42.5	42.5	42.5	42.5	42.5	•	42.5	42.5	42.5	42.0		41.5	41.5	ä	41.0	41.0	40.6	40.6	40.6	40.6	40.6	•	40.6
	Score	106	51	49	46.5	46	45	45	45	45	45	45	45	45	45	44.5	44	44	44	44	43.5	43.5	43	43	43	43	43	43	43
Result	No.	н	7	٣	4	2	9	7	89	o,	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28

ubiquitin-specific hypothetical prote glucosyltransferas MEGPI protein - ra hypothetical prote FMN-containing NAD tetraspan TSPAN-6	opropries	sove process - mon
S67665 T21557 S22737 T400252 C64024 AE1709	T50286 786138 A86194 T47389 T08340 AC0858 AD1384	171669
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1162 11599 4351 243 243	0 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	821
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### ALIGNMENTS

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tetraspan TSPAN-1 - human
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C;Species: Homo sapiens (man) C;Date: 19-May-2000 #sequence\_revision 19-May-2000 #text\_change 09-Jul-2004

C;Accession: A59262.
R;Todd, S.C.; Doctor, V.S.; Levy, S.
Biochim. Biophys. Acta 1399, 101-104, 1998
A;Title: Sequences and expression of six new members of the tetraspanin/TM4SF family. A;Accession: A59262.

Ajstatus: preliminary; not compared with conceptual translation Aholecule type: mRNA AjResidues: 1-241 (TOD) Ajcross-references: UNIPROT:060635; GB:AF054838; NID:g2997740; PIDN:AAC69714.1; PID:g299

Gaps ; 0 Query Match
100.0%; Score 106; DB 2; Length 241;
Best Local Similarity 100.0%; Pred. No. 4.1e-09;
Matches 19; Conservative 0; Mismatches 0; Indels ( A;Gene: TSPAN-1 C;Superfamily: CD9 antigen

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## 151 GFTNYTDFEDSPYFKENSA 169 1 GFTNYTDFEDSPYFKENSA 19

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T-cell acute lymphoblastic leukemia associated antigen 1 - human N;Alternate names: cell surface glycoprotein (clone A15); TALLA-1 (Species: Homo sapiens (man) (m

A; Molecule type: mRNA
A; Residues: 1-244 cRES.
A; Residues: 1-244 cRES.
A; Residues: 1-244 cRES.
A; Residues: 1-244 cRES.
A; Experimental source: immature T cell line HPB-ALL
A; Experimental source: immature T cell line HPB-ALL
B; Experimental source: immature T cell line HPB-ALL
Int. J. Cancer 51, 7015, 1995
A; Takagi, S.; Pulylakawa, K.; Immi, T.; Fukuhara, N.; Fukudome, K.; Minegishi, M.; Tsuchiy
Int. J. Cancer 61, 706-715, 1995
A; Title: identification of a highly specific surface marker of T-cell acute lymphoblastic
A; Reference number: I54784; MUID:95286314; PMID:7768645

A,Accession: I54784 A,Status: translated from GB/EMBL/DDBJ A;Molecule type: mRNA A,Residues: 1-244 <RE2>

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A, Map position: linear chromosome
C, Superfamily: inner membrane protein ugpA
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                                                                                                                                                                                       43.9%;
Best Local Similarity 47.4%;
Matches 9; Conservative
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A, Molecule type: DNA
A, Residues: 1-308 < KUR>
                                                                                 A; Map position: 3
             A; Gene: C13B9.4
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F;208-232/Domain: transmembrane #status predicted <TM4>
F;233-244/Domain: intracellular #status predicted <CY3>
F;49,150,153,172,183/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
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A,Cross-references: GB:D29808; NID:g475005; PIDN:BAA06191.1; PID:g475006 C,Genetics:
A,Gene: GDB:WKS1; DXS1692E; A15; TALLA-1
A,Gross-references: GDB:202921
A,Map position: Xq11-Xq11
C,Superfamily: CD9 antigen
C,Superfamily: CD9 antigen
C;Seywords: g4yxoprotein; surface antigen; transmembrane protein
F;11-11/Domain: intracellular #status predicted <TM1>F;12-35/Domain: transmembrane #status predicted <TM1>F;36-51/Domain: intracellular #status predicted <TM2>F;36-51/Domain: intracellular #status predicted <TM2>F;37-76/Domain: intracellular #status predicted <TM2>F;37-30/Domain: intracellular #status predicted <TM2>F;37-30/Domain: intracellular #status predicted <TM2>F;31-10/Domain: intracellular #status predicted <TM3>F;31-10/Domain: intracellular #status predicted 
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Best Local Similarity 52.9%; Pred. No. 1.7;
Matches 9; Conservative 3; Mismatches 5; Indels
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| GIHNYSDWENTDWFKE 164
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A; Cross-references: UNIPROT: QBUAT4; GB: AE008689; PIDN: AAL44099.1; PID: 917741667; GSPDB:GN
A; Experimental source: strain CS8 (Dupont)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTP-binding regulatory protein Gs alpha chain (adenylate cyclase-stimulating) - African c N.Alternate names: guanine nucleotide binding protein Gs alpha chain; heterotrimeric G-pi c; Species: Xenopus laevis (African clawed frog) c; Date: 31-Dec-1992 #sequence_revision 31-Dec-1992 #text_change 09-Jul-2004 C; Accession: S11447 R; Purcell, P.; Jorquera, H.; Codina, J.; Birnbaumer, L.; Allende FEBS Lett. 268, 27-31, 1990 A; Title: Molecular cloning and sequence determination of four different cDNA species codi A; Reference number: S11045; MuID:90346157; PMID:2116977
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CjAccession: AE2960
R;Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; Wood, G.E.; Chen, Y.; Woo, L. R;Wood, D.W.; Setubal, J.C.; Guenthner, D.; Kutyavin, T.; Levy, R.; Li, M.; McClellē starge, G.; Giller, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Levy, R.; Li, M.; McClellē Karp, P.; Romero, P.; Zhang, S.
Science 294, 2117-2323, 2001
A;Authors: Yoo, H.; Tao, Y.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gordon-Kamm, El
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A, Molecule type: mRNA

A, Molecule type: mRNA

A, Molecule type: mRNA

A, Cross to the bear and part as family of guanine nucleotide-binding proteins that relay

A, Cross to the bear and gamma chains, required for GTPase activity, appear to be common to all-

ains. The beta and gamma chains, required for GTPase activity, appear to be common to all-

rase; it is specific for each type of G protein.

C, Superfamily: GTP-binding regulatory protein Gs alpha chain

C, Reywords: alternative splicing; blocked amino end; GTP binding; heterotrimer; lipoprote

C, Reywords: alternative splicing; blocked amino end; GTP binding; heterotrimer; lipoprote

F, 379/FRegion: nucleotide-binding motif A (P-loop)

F, 77-280/Region: GTP-binding MKN motif

F, Modified site: myristylated amino end (Gly) (in mature form) #status predicted

F, 381 Binding site: palmitate (Cys) (covalent) #status predicted

F, 186/Modified site: ADP-ribosylarginine (Arg) (by cholera toxin) #status predicted
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Ajtitle: The Genome of the Natural Genetic Engineer Agrobacterium tumefaciens CS8.
A,Reference number: AB2577; WUID:21608550; PMID:11743193
A,Accession: AE2960
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DB 2;
                                                                                         4; Mismatches
Score 46.5;
Pred. No. 26
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C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 09-Jul-2004
C;Accession: H97714
R;Ogata, H; Audic, S; Renesto-Audiffren, P.; Fournier, P.E.; Barbe, V.; Samson, D.; Ro
Science 293, 2093-2098, 2001
A;Title: Mechanisms of Evolution in Rickettsia conorii and Rickettsia prowazekii.
                                                                                                                                                                                                                                                                                                                                                                             A;Cross-references: UNIPROT:Q92JE7; GB:AE006914; PIDN:AAL02658.1; PID:g15619162; GSPDB:G
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A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-431 < HAR>
A;Cross-references: UNIPROT:094559; EMBL:299753; PIDN:CAB16876.1; GSPDB:GN00066; SPDB:SP
A;Experimental source: strain 972h-; cosmid c23C4
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Nucleic Acids Res. 28, 417-431, 2000
A;Title: Complete genome sequence of the alkaliphilic bacterium Bacillus halodurans and A;Reference number: A83650; MUID:20512582; PMID:11058132
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A;Cross-references: UNIPROT:Q9K618; GB:AP001520; GB:BA000004; NID:g10176401; PIDN:BAB076
A;Experimental source: strain C-125
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Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 09-Jul-2004
      C;Species: Rickettsia conorii
C;Date: 30-Sep-2001 #sequence_revision 30-Sep-2001 #text_change 09-Jul-2004
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C;Date: 01-Dec-2000 #sequence_revision 01-Dec-2000 #text_change 09-Jul-2004
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R;Harris, D.; Squares, R.; Barrell, B.G.; Rajandream, M.A.; Wood, V.
submitted to the EMBL Data Library, September 1997
A;Reference number: Z21782
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26;
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2; Mismatches
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Pred. No.
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C;Superfamily: aspartate transaminase
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231 TNITDSQPAPYMKE 244
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Best Local Similarity 50.v.
Best Local 8; Conservative
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Best Local Similarity
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A Molecule type: DNA
A Residues: 1-401 <KUR>
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A;Note: Nostoc sp. PCC 7120
A;Note: Nostoc sp. ptrain PCC 7120
A;Note: Nostoc sp. strain PCC 7120
C;Date: 14-Dec-2001 #text_change 09-Jul-2004
C;Accession: AB2078
A;Kaneko, T.; Nakamura, Y.; Wolly, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, A.; Iriguchi Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata, S DNA Res. 8, 205-213, 2001
A;Reference number: AB1807; MUID:21595285; PMID:11759840
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A;Experimental source: strain PCC 7120
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   Score 45; DB 2; Length 308; Pred. No. 19;
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                                                                         Indels
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                                                                     1; Mismatches
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1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C, Superfamily: inner membrane protein ugpA
                                                                                                                                    1 GPTNYTDFEDSPYFKENS 18
                                                                                                                                                                                                  71 GFENYTAMFDDPIFWETT 88
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Query Match
Best Local Similarity 50.0%;
Matches 9; Conservative
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A;Map position: linear chromosome
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A;Residues: 1-322 <KUR>
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Best Local
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Riglager, P.; Frangeul, L.; Buchrieser, C.; Amend, A.; Baquero, F.; Berche, P.; Bloecker, R; Glager, P.; Frangeul, L.; Buchrieser, C.; Amend, L.; Dussurget, O.; Entian, K.D.; Fsihi, H., D.; Jones, L.M.; Karst, U. Science 294, 849-852, 2001.
Science 294, 849-852, 2001.
Science 294, 849-852, 2001.
Science 294, Reff. J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, E.; Maitournam, A.; Mat AjAuthors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, E.; Maitournam, A.; Mat AjAuthors: C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.; Voss, H.; Wehland, A; Title: Comparative genomics of Listeria species.
A; Reference number: AB1077; MUID:21537279; PMID:11679669
A; Accession: AD1787
A; Andolecule type: DATA
                                                                                                                                                                                                                                                                                                                                 A;Molecule type: DNA
A;Residues: 1-1451 <RES>
A;Cross-references: UNIPROT:Q45336; EMBL:U10527; NID:g532316; PIDN:AAA20995.1; PID:g53231
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A; Cross-references: GB: AL592022; PIDN: CAC98068.1; PID: 916415377; GSPDB: GN00178
                                     dermonecrotic toxin - Bordetella pertussis
C;Species: Bordetella pertussis
C;Species: Bordetella pertussis
C;Species: Bordetella pertussis
C;Species: L2-Mug-1996 #sequence_revision 12-Aug-1996 #text_change 09-Jul-2004
C;Accession: 12-Mug-1895, A.A.
Infect. Immun. 62, 3817-3828, 1994
A;Title: Characterization of the Dermonecrotic Toxin in the Genus Bordetella. A;Reference numbor: 140325, MulD:94341887; PMID:8063398
A;Status: preliminary; translated from GB/EMBL/DDBJ
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C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 28-Jul-2003
C;Accession: AD1787
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Pred. No. 1.1e+02;
2; Mismatches 4;
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C,Superfamily: lysine decarboxylase
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Best Local Similarity 52.6%;
Matches 10; Conservative
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Best Local Similarity 57...
Acconservative
Si Conservative
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Job time : 20.678 secs
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                                                                                                                                                                                                                                                                                                 X-pro dipeptidyl-peptidase [imported] - Streptococcus pneumoniae (strain TIGR4)
C;Species: Streptococcus pneumoniae
C;Species: Streptococcus pneumoniae
C;Date: 03-Aug-2001 #sequence_revision 03-Aug-2001 #text_change 09-Jul-2004
C;Accession: D95103
R;Tettelin, H.; Nelson, K.E.; Paulsen, I.T.; Eisen, J.A.; Read, T.D.; Peterson, S.; Heid on, J.D.; Umayam, L.A.; White, O.; Salzberg, S.L.; Lewis, M.R.; Radune, D.; Holtzapple, nson, T.; Hickey, E.K.; Holt, I.E.
Science 293, 498-506, 2001
A;Authors: Loftus, B.J.; Yang, F.; Smith, H.O.; Venter, J.C.; Dougherty, B.A.; Morrison, A;Authors: Loftus, B.J.; Yang, F.; Smith, H.O.; Venter, J.C.; Dougherty, B.A.; Morrison, A;Reference number: A95000; MUID:21357209; PMID:11463916
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A;Residues: 1-737 «KUR»
A;Cross-references: UNIPROT:Q97RC8; GB:AE005672; PIDN:AAK75021.1; PID:g14972369; GSPDB:G
A;Experimental source: strain TIGR4
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C;Species: Streptococcus pneumoniae
C;Species: 22-0ct-2001 #sequence_revision 22-0ct-2001 #text_change 09-Jul-2004
C;Accession: B97971
R;Hoskins, J.A.; Alborn Jr., W.; Arnold, J.; Blaszczak, L.; Burgett, S.; DeHoff, B.S.; E R;Hoskins, J.A.; Alborn Jr., W.; Lefkowitz, E.J.; Lu, J.; Matsushima, P.; McAhren, S.; M. P.; Sun, P.M.; Winkler, M.E.
J; Bacteriol. 183, 5709-5717, 2001
A;Authors: Yang, Y.; Young-Bellido, M.; Zhao, G.; Zook, C.; Baltz, R.H.; Jaskunas, S.R.; A;Title: Genome of the Bacterium Streptococcus pneumoniae Strain R6.
A;Reference number: A97872; MUID:21429245; PMID:11544234
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A;Molecule type: DNA
A;Residues: 1-795 <KUR>
A;Cross-references: UNIPROT:Q8DQ87; GB:AE007317; PIDN:AAK99598.1; PID:g15458392; GSPDB:
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Length 648;
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C;Superfamily: Lactococcus X-Pro dipeptidyl-peptidase
C;Keywords: dipeptidylpeptide hydrolase
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  DB 2;
44;
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Score 45; DB 2
Pred. No. 44;
1; Mismatches
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Pred. No. 53;
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nilarity 44.4%;
Conservative 4
  Query Match
Best Local Similarity 72.7
Matches 8; Conservative
                                                                                                                                                                      332 TOMEDAAYFKE 342
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                                                                                                                 TOFEDSPYFKE
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nes 8; Conserv
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Matches 8; Conserv
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A;Gene: SP0894
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- Listeria innocua (strain Clip11262)

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Length 1451;

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Gaps

3;

Indels

Length 459;

DB 2;

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homo sapien
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      sulfolobus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      plasmodium
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                                             5, 2005, 19:36:20; Search time 90.1695 Seconds (without alignments)
107.902 Million cell updates/sec
                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                  Description
                                                                                                                                                                                                                                                                                                                                                                               07yqh1
07yqh2
06gp11
07yql0
07yqk9
07z3z6
                                                                                                                                                                                                                                                                                                                                                                                                                                     Q89xr2
Q6n118
Q9uwn8
Q8r0q6
Q7rd42
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07z2i5
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06ddy1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8bpu2
Q62283
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Q7t2b8
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08s2j1
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                                                                                                                                                     1612378
GenCore version 5.1.6
(c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                    1612378 Beqs, 512079187 residues
                                                                              US-09-780-669-114_COPY_151_169
                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                              09959
0810P9
07029
072215
072011
072012
06GP11
1482_PANTR
0723ZF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1482 MOUSE
1488 HUMAN
1488 MOUSE
Q66H06
                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                TSN1 HUMAN
Q6AYR9
                                                                                                                                                                                                                                                                                                                                                                                                                             T4S2 HUMAN
Q89XR2
                              - protein search, using sw model
                                                                                             GFTNYTDFEDSPYFKENSA 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q9UWN8
Q8RQ6
Q7RD42
Q6P420
Q6PDN6
Q6DDY1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q81LA9
Q89GR4
Q7T2B8
Q9GMU7
                                                                                                             BLOSUM62
Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                          UniProt_03:*
1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                    length: 0
length: 2000000000
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Match Length DB
        Copyright
                                              February
                                                                                                                                                                                                                                                                                                                                                                      seq
seq
                                                                                                                                                                                                                                                                                                                                               Perfect score:
                                                                                                             Scoring table:
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                                                                                                                                                                   Minimum DB
Maximum DB
                              OM protein
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                                                                                                                                                                                                                           Database
                                              Run on:
                                                                                                                                                                                                                                                                                                         Result
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Q6fr86 candida gla		Q67qv1 symbiobacte	Q976g5 sulfolobus	095xk8 caenorhabdi	•	Q917x0 clostridium	Q94£78 zea mays (m	_	Q88tv7 lactobacill	Q7q3z8 anopheles q	P24799 xenopus lae	_	
QEFR86	QBRBJO	Q67QV1	0976G5	Q95XK8	Q8P5R6	Q9L7X0	Q94F78	Q89PE4	Q88TV7	Q7Q3Z8	GBAS XENLA	Q7MZG8	Q8XJJ0
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790	186	194	328	340	495	109	258	271	299	323	379	384	412
45.3	44.3	44.3	44.3	44.3	43.9	43.4	43.4	43.4	43.4	43.4	43.4	43.4	43.4
	7	47	47	47	46.5	46	46	46	46	46	46	46	46
48	4				4								

### ALIGNMENTS

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TISSUE=Colon;

X MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

X Alausner R.D., Feingold E.A., Grouse L.H., Derge J.G.,

Rausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

A Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

A Hopkins R.P., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Hopkins R.P., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A Datchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

B Hownstein M.J., Usdin T.B., Doshiyuki S., Carninci P., Frange C.,

RA Brownstein M.J., Woldin T.B., Toshiyuki S., Carninci P., Frange C.,

RA Brownstein M.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

R Richards S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

R Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

R Alleton B., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Rhiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

RA Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

Butterfield Y.S.N., Krzywinski M.I., Skalska U., Smailus D.E.,

R Schnerch A., Schein J.B., Jones S.J.M., Marra M.A.;

RA Schnerch A., Schein J.B., Jones S.J.M., Marra M.A.;

RT "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.";

R Proc. Natl. Acad. Sci. U.S.A. 99:16899-16803(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-98390278; PubMed-9714763; DOI=10.1016/S0167-4781(98)00087-6; Todd S.C., Doctor V.S., Levy S.; "Sequences and expression of six new members of the tetraspanin/TM4SF
                                                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
NOI _ TaxID=9606;
                                                                                           060635; 060745; 16-0CT-2001 (Rel. 40, Created) 16-0CT-2001 (Rel. 40, Last sequence update) 05-JUL-2004 (Rel. 44, Last annotation update) 17-Etraspanin 1 (Tepan-1) (Tetraspanin 1 (Tetrasp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
Rubinstein E., Serru V., Boucheix C.;
"New tetraspans identified in the EST database.";
Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
Puls K.L., Ni J., Liu D., Morahan G., Wright M.D.;
"The molecular characterization of four terraspanins.";
Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
                                                                               241 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biochim. Biophys. Acta 1399:101-104(1998)
                                                                               PRT;
                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                               ISN1 HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family.";
RESULT 1
TSN1 HUMAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus norvegicus (Rat).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                     Extracellular (Potential).
Potential.
Cytoplasmic (Potential).
N-linked (GlcNAc. .) (Potential).
N-linked (GlcNAc. .) (Potential).
N-linked (GlcNAc. .) (Potential).
N-linked (GlcNAc. .) (Potential).
K -> E (In Ref. 1).
W, AP938AD7147CB884 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ö
-i. SUBCELLULAR LOCATION: Integral membrane protein (Probable).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 106; DB 1; Length 241; 100.0%; Pred. No. 1.7e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                    Extracellular (Potential). Potential.
                                                                                                                                                                                                                                                                                                                                                                           Cytoplasmic (Potential). Potential.
                                                                                                                                                                                                                                                                                                                             Cytoplasmic (Potential).
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Last annotation update)
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                                                                                                                                                                                                      241 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 GFTNYTDFEDSPYFKENSA 19
                                                                                                                                            EMBL; AF054838; AAC69714.1; -. EMBL; AF065388; AAC17119.1; -.
                                                                                                                                                                      EMBL; AF133425; AAF08364.1; -. EMBL; BC007290; AAH07290.1; -. EMBL; BC013404; AAH13404.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26301 MW;
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25-OCT-2004 (TrEMBLrel. 28,
25-OCT-2004 (TrEMBLrel. 28,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
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154
178
184
189
241 AA;
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Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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Name=MGC93753;
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TRANSMEM
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TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
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STRAIN-MRH; TISSUE-Nammary tumor;

STRAIN-MRH; TISSUE-Nammary tumor;

KEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

KETARIDEPERS R.L., Feingold B.A., Grouse L.H., Derge J.G.,

Klausher R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Altschul S.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Rapleton M., Soares M.B., Bonaldo M.F., Carainci P., Prange C.,

Brownstein M.J., Ugdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Rosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gubbs R.A.,

Alchards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Nilalon D.K., Wuzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Willalon D.K., Wuzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Rahey J., Helton B., Ketteman M., Madan A., Nodrigues S., Sanchez A.,

Rhitting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Rhitting M., Madan J.W., Green E.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
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01-JUN-2001 (TIEMBLIEL. 17, Last sequence update)
25-OCT-2004 (TIEMBLIEL. 28, Last annotation update)
RIKEN cDNA 9030418M05 (Mus musculus adult male colon cDNA, RIKEN full-length enriched library, clone:9030418M05 product:similar to tetraspan
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.A., McEwan P.J., McKernan K.J., Malek J.B., Munzatine P.H., Klohards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Rhitling M., Madan A., Young A.C., Shevchenko Y., Boulfard G.G., Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C., Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalska U., Smallus D.E., Schnerch A., Schein J.E., "Generation and initial analysis of more than 15,000 full-length human and man an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUB-Kidney;

Director MGC Project;

Submitted (ANG-2004) to the EMBL/GenBank/DDBJ databases.

BMBL; BC070938; ARH78938.1; -.

GO; GO:0016021; C:integral to membrane; IEA.

InterPro; IPR00222; RhesusRHD.

InterPro; IPR00955; Tetraspanin.

InterPro; IPR00331; Transmem 4.

Pfam; PR00335; Tetraspanin; I.

Pfam; PR00342; RHESUSRHD.

PRINTS; PR00342; THFOUR.

PRINTS; PR00342; THFOUR.

PRINTS; PR00342; THFOUR.

SR PRINTS; PR00341; TM4 1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58.5%; Score 62; DB 2; Length 241; 64.7%; Pred. No. 0.15; ive 1; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002)
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151 GFNNYTDFNSSRFVKEN 167
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nes 11; Conserv
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Matches
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RESULT 4
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SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
A Arakawa T., Azawica S., Akimura T., Aono H., Arai A.,
A Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
A Arakawa T., Bono H., Carninci P., Fukuda S., Fukunishi Y., Furuno M.,
Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Hori F.,
Imotani K., Ishii Y., Itoh M., Izawa M., Kosuka T., Kato H.,
A Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
A Kawai J., Kojima Y., Konno H., Kouda M., Koya S., Kurihara C.,
A Kawai J., Kojima Y., Konno H., Nishi K., Nomura K., Numazaki R., Ohno M.,
Okazaki Y., Okido T., Owa C., Saito R., Sakai K.,
A Sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Sakai K.,
A Sogabe Y., Suzuki H., Tagawi M., Tagawa A., Takahashi F., Tanaka T.,
Topima Y., Toya T., Yamanura T., Yamanaka T., Yashiaka K., Yoshino M., Muramatu M., Hayashizaki Y.,
Submitted (Apr-2002) to the EMBL/GenBank/DDBJ databases.
BMBL, BCO03448, AAR034481, ...
R MGD, MGI:1914055; 9030418M0SRik.
Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A.; "Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the RIKEN Genome Exploration Research Group Phase I & II Team, "Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs."; Nature 420:563-573 (2002).
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STRAIR=CS7BL/6J; TISSUB=COlon;
MEDLINE=CS7BL/6J; TISSUB=COlon;
MEDLINE=C97BL/6J; TISSUB=COlon;
MEDLINE=C97BL/6J; TISSUB=COLON;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itch M.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
Mormalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=CS7BL/6G; TISSUB=Colon;
MEDLINE=9927923; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN=C57BL/6J; TISSUE-Colon;
STRAIN=21085660; PubMed=11217851; DOI=10.1038/35055500;
RIKEN FANTOM CONSORTIUM;
"Functional annotation of a full-length mouse cDNA collection.";
Nature 409:685-690(2001).
                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN-MRI; TISSUE=Mammary tumor;
Straubberg R.
Stubmitted (FEB-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                              and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
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STRAIN=C57BL/6J; TISSUE=Colon;
The FANTOM Consortium,
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Straubberg R.L., Feinged E.A., Grouse L.H., Derge J.G.,

Altausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bahat N.K.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bahat N.K.,

Antschul R.F., Jozdan H., Moore T., Max S.I., Wang J., Heaba F.,

Boatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Brownstein M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Usdin T.B., Toehiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Raba S.S., Morley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Raber J., Helton B., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Boutfard G.G.,

Blakesley R.W., Touchman J.W., Green B.D., Dickson M.C.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,

"Generation and initial analysis of more than 15,000 full-length human
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Mammalia, Butheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
NCBI_TaxID=10090;
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Submitted (MAR-2003) to the EMBL/GenBank/DDBJ databases.
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240 AA; 26356 MW; AD4C448A32BC2999 CRC64;
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GO; GO:0005615; C:extracellular space; TAS.
GO; GO:0016021; C:integral to membrane; TAS.
InterPro; IPR002229; RhesusRHD.
InterPro; IPR008952; Tetraspanin.
InterPro; IPR003301; Transmem 4.
Pfam; PF00335; Tetraspanin; T.
PRINTS; PR00342; RHESUSRHD.
PRINTS; PR00259; TWPCUR.
PROSTIE; PR00411; TW4 1;
PROSTIE; PR00411; TW4 1;
SEQUENCE 240 AA; 26356 MW; AD4C448A32BC299;
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64.3%; Pred. No. 1.4;
tive 2; Mismatches
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GO; GO:0016021; C:integral to membrane; IEA.
InterPro; IPR008952; Tetraspanin.
InterPro; IPR003301; Transmem 4.
Pfam; PF00335; Tetraspanin; I.
PRINTS; PR00259; TMFOUR.
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01-JUN-2003 (TrEMBLrel. 24,
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Mus musculus (Mouse).
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SEQUENCE 248 AA; 2
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52
5774 MW; 420AB346A5074DC8 CRC64;
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Pred. No. 1.4;
3; Mismatches
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InterPro; IPR000301; Transmem 4.
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52.9%;
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                                                                                                                                                                                   BAC80938.1;
BAC80939.1;
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Best Local Similarity 52.9
Matches 9; Conservative
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AB102476; 1
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AB102472;
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AB102474;
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AB102467;
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AB102470;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Genome sequence of the cyanobacterium Prochlorococcus marinus $8120, a nearly minimal oxyphototrophic genome.";

Proc. Natl. Acad. $8.1 U.S.A. 100:10020-10025 (2003).

EMBL, AE017165; AAQ00538.1; -
EMBL, AE017165; AAQ00538.1; -
GO, GO:0016021; C:integral to membrane; IEA.
GO, GO:0016021; C:integral to membrane; IEA.
GO, GO:0010037; F:heme binding; IEA.
GO; GO:0000118; P:electron transport; IEA.
InterPro; IPR006241; Cyt. b559.
InterPro; IPR004471; Cyt. b559.
InterPro; IPR004471; Cyt. b559.
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Homo sapivota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Eukaryota, Metazoa, Chordates, Catarrhini, Hominidae, Homo.
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN=SARG / CCMP 1375 / SS120;
MEDLINE=22810154; PubMed=12917486; DOI=10.1073/pnas.1733211100;
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Bacteria, Cyanobacteria, Prochlorales, Prochlorococcaceae,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96 AA; 10905 MW; B07816D33A1161AA CRC64;
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Last annotation update)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chimpanzees.";
Mol. Biol. Evol. 20:1281-1289(2003).
EMBL; AB102461; BAC80930.1; -.
                                                                                                                                                                                                                               PRT;
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                                                               | ||||:||:|||
144 GVKNYTDWNDNPYF 157
                                                                                                                                                                                                                                                                                                                                                                       Homolog of PabF protein.
OrderedLocusNames=Pro1494;
                                     1 GFINYIDFEDSPYF 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 58.8
Matches 10; Conservative
                                                                                                                                                                                                                                     PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prochlorococcus.
NCBI_TaxID=1219;
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Length 52; 5; Indels

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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
VCBI_TaxID=37012;
                                                                                                                                                                                                                                                                             MEDLINE=22763540; PubMed=12777533; DOI=10.1093/molbev/msgl34; Kitano T., Schwarz C., Nickel B., Paabo S.; "Gene diversity patterns at 10 X-chromosomal loci in humans and
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Pred. No. 1.4;
3; Mismatches 5; Indels
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52 52
52 AA; 5774 MW; 420AB346A5074DC8 CRC64;
                                                          chimpanzees.";
Mol. Biol. Evol. 20:1281-1289 (2003).
EMBL, AB102481; BAC80950.1; -
EMBL, AB102483; BAC80951.1; -
EMBL, AB102483; BAC80952.1; -
GO, GO:0016021; C:integral to membrane; IEA.
InterPro; IPR0008952; Ternaspanin.
InterPro; IPR000301; Transmem_4.
52 AA.
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5 GVQNYTNWSTSPYFLEH

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Straubberg R.L., Peingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Staplecon M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Pan.
NCBI_TaxID=37011;
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Amphibia, Batrachia, Anura, Mesobatrachia, Pipoidea, Pipidae,
Xenopodinae, Xenopus.
                                                                                                                                                                                                                            MEDLINE=22763540; PubMed=12777533; DOI=10.1093/molbev/msg134; Kitano T., Schwarz C., Nickel B., Paabo S.; "Gene diversity patterns at 10 X-chromosomal loci in humans and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Spleen;
MEDLINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;
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Pred. No. 1.4;
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                                                                  Last sequence update)
Last annotation update)
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Last annotation update)
                                             01-OCT-2003 (TrEMBLrel. 25, Created)
01-OCT-2003 (TrEMBLrel. 25, Last sequence updat
01-CCT-2003 (TrEMBLrel. 25, Last annotation upd
02-ULL-2004 (TREMBLrel. 27, Last annotation upd
Transmembrane 4 superfamily member 2 (Fragment)
                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AB102490; BAC80959.1; -.
GO; GO:0016021; C:integral to membrane; IEA.
InterPro; IPR008952; Tetraspanin.
InterPro; IPR003301; Transmem 4.
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                                                                                                                                                                                                                                                                                             MOl. Biol. Evol. 20:1281-1289(2003).
EMBL; AB102484; BAC80953.1; -.
EMBL; AB102485; BAC80954.1; -.
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                  PRT;
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BAC80956.1; -.
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52.9%;
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                                                                                                                               Pan troglodytes troglodytes
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                PRELIMINARY;
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Best Local Similarity
                                                                                                                                                                                                               FROM N.A.
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Name=MGC80751;
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AB102490;
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                                                                                                                                                                                                                                                                               chimpanzees."
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Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villadon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Krzywinski M.I., Skalaka J., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalaka U., Smailus D.E., Schnerch A., Schein J.E., Jones S.J., Marra M.A.,
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Mol. B101. Evol. 20:1281-1289(2003).
Mol. B101. Evol. 20:1281-1289 (2003).
Mol. B101. Evol. May be involved in cell proliferation and cell motility.
-!- SUNCELLULAR LOCATION: Integral membrane protein.
-!- SUMILARITY: Belongs to the tetraspanin (TM4SF) family.
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                                                                                                                                                                                                                                                                           TISSUE-Spleen;
BEDLINES-2341132; PubMed=12454917; DOI=10.1002/dvdy.10174;
Klein S.L., Strausberg R.L., Wagner L., Pontius J., Clifton S.W.,
Richardson P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pan troglodytes (Chimpanzee).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Pan.
                                                                                                                                                                                                                                                                                                                                                      "Genetic and genomic tools for Xenopus research: The NIH Xenopus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=22763540; PubMed=12777533; DOI=10.1093/molbev/msgl34;
Kitano T., Schwarz C., Nickel B., Paabo S.;
"Gene diversity patterns at 10 X-chromosomal loci in humans and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 240;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases. EMBL, BC073338, AAH7338.1, -. GO: GO:0016021; C:integral to membrane; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR008952; Tetraspanin.
InterPro; IPR00301; Transmem 4.
Pfam, PF00335; Tetraspanin; I.
PRINTS; PR00259; TWFOUR.
SEQUENCE 240 AA; 26875 MW; 96475F0A8F920998 CRC64;
                                                                                                                                                                                             and mouse CDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 51; DB 2;
Pred. No. 8.4;
6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTYQLO;
05-JUL-2004 (Rel. 44, Created)
05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Transmembrane 4 superfamily member 2.
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Best Local Similarity 42.1
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Klein S., Gerhard D.S.;
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Cytoplasmic (Potential).

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DOMAIN
TRANSMEM
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CARBOHYD
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CARBOHYD
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072326,
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T4S2 HUMAN
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Matches
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Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Butheria; Primates; Catarrhini; Hominidae; Pongo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.

MEDILIBE-22763540; PubMed=12777533; DOI=10.1093/molbev/msgl34;
MEDILIBE-22763540; PubMed=12777533; DOI=10.1093/molbev/msgl34;
Kitano T., Schwarz C., Nickel B., Paabo S.;
"Gene diversity patterns at 10 X-chromosomal loci in humans and
                                                                                                                                                                                                                                                                                                                                                                            Cytoplasmic (Potential).

N-linked (GlCNAc. .) (Potential)

N-linked (GlCNAc. .) (Potential)

N-linked (GlCNAc. .) (Potential)

N-linked (GlCNAc. .) (Potential)

N-linked (GlCNAc. .) (Potential)
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Pred. No. 8.5;
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Potential.
Extracellular (Potential).
Potential.
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Potential.
Extracellular (Potential).
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05-JUL-2004 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Transmembrane 4 superfamily member 2.
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                                                                                                                                                                                                                                                                                                                                                  Potential.
     send an email to license@isb-sib.ch)
                                              EMBL; AB102666; BAC81135.1; -.
InterPro; IPR000301; Transmem_4.
Pfam; PR00335; Tetraspannin; 1.
PR0SITE; PS00421; TM4_1; 1.
Glycoprotein; Transmembrane.
DOMAIN
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Pfam; PF00335; Tetraspannin; T.
PROSITE; PS00421; TM4 1; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26972 MW;
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Similarity 52.9%;
9; Conservative 3
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CARBOHYD
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T4S2_PONPY
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P41732; QBNVG5; QDUREY9;
001-NOV-1995 (Rel. 32, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
15-PEB-2003 (Rel. 44, Last annotation update)
15-PEB-2003 (Rel. 44, Last annotation update)
15-PEB-2003 (Rel. 41, Last sequence update)
16-PEB-2003 (Rel. 41, Last sequence update)
16-PEB-2003 (Rel. 41, Last sequence update)
17-PEB-2003 (Rel. 41, Last sequence update)
18-PEB-2003 (
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Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.
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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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                                                                                                                                                                                                                  (Potential)
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Pred. No. 8.5;
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Pred. No. 8.5;
3; Mismatches 5; Indels
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                                                                                                                                          Cytoplasmic (Potential).
N-linked (GlCNAc. . .) (1
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N-linked (GlcNAc. ..)
N-linked (GlcNAc. ..)
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EMBL, AB102665; BAC81134.1; -.

GO; GO:0016021; C:integral to membrane; IEA.

InterPro; IPR000952; Tetraspanin.

InterPro; IPR000301; Transmem 4.

Pfam; PF00335; Tetraspanin; 1.
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                                   Potential
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Transmembrane 4 superfamily member 2.
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147 GVQNYTNWSTSPYFLEH 163
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Similarity 52.9%;
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les 9; Conservative
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EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RA Strausberg R.L., Fubmed=124'/932; DOI=10.1073/pnas.242603899; Strausberg R.L., Fubrgold E.A., Grouse L.H., Derge J.G., Kausner R.D., Collins F.S., Wagner L., Shemmen C.M., Schuler G.D., Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K., Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F., Batchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L., Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., RA Baba S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S.W., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., RA Fichards S.W., Wallahy S.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S.W., Mazny D.M., Sodergren E.J., Lu X., Gibbs R.A., Willalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Whilling M., Madan A., Young A.C., Shevchenko Y., Boutfard G.G., Malekeley R.W., Touchman J.W., Green E.D., Dickson M.C., Rablakesley R.W., Touchman J.W., Schmutz J., Myers R.M., Schein J.E., Jones S.J.M., Marra M.A.; Stalska U., Snailus D.E., Randenterfield Y.S.N., Kzzywinski M.I., Skalska U., Snailus D.E., Randen R., Schein J.E., Jones S.J.M., Marra M.A.; Randen R., Randen R., Schein J.E., Jones S.J.M., Marra M.A.; Randen R., Randen R., Schein J.E., Jones S.J.M., Marra M.A.; Randen R., Randen R., Schein J.E., Jones S.J.M., Marra M.A.; Randen R., Randen R., Randen R., Schein J.E., Jones S.J.M., Marra M.A.; Randen R., Randen R.
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                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A., AND VARIANT MRX58 HIS-172.

MEDLINE=20120717; PubMed=10655063; DOI=10.1038/72829;
Zemni R., Bienveun T., Vinnet M.C., Sefiani A., Carrie A., Billuart McDonell N., Couvert P., Francis F., Chafey P., Fauchereau F., Friocourt G., desPortes V., Cardona A., Frints S., Meindl A., Brandau O., Ronce N., Moraine C., Bokhoven H.V., Ropers H.-H., Sudbrak R., Kahn A., Fryns J.-P., Beldjord C., Chelly J.; H., "A new gene involved in X-linked mental retardation identified by Manalysis of an X:2 balanced translocation.";
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WWW-"http://www.ncbi.nlm.nih.gov/prow/guide/501790534_g.htm".
                                                                                       Emi N., Kitaori K., Seto M., Ueda R., Saito H., Takahashi T.,
"IsoJation of a novel cDNA clone showing marked similarity to
MR491/CD63 superfamily.";
Immunogenetics 37:193-198(1993).
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Submitted (MAY-2001) to the EMBL/GenBank/DDBJ databases
                                                      TISSUE-Peripheral blood lymphocytes;
MEDLINE=93131291; PubMed=8420826;
                                                                                                                                                                                   SEQUENCE OF 4-249 FROM N.A.
TISSUE=Peripheral blood;
MEDLINE=95286314; PubMed=7768645;
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 NCBI_TaxID=9606;
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                                       (See http://www.isb-sib.ch/announce/
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Cytoplasmic (Potential).
Cytoplasmic (Potential).
Extracellular (Potential).
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Cytoplasmic (Potential).
N-linked (GlCNAc. .) (Potential).
P -> H (in MRXSB).
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Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Bradyrhizobiaceae; Bradyrhizobium.
NCBI_TaxID=375;
    as its content
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E -> K (in Ref. 5).
A -> T (in Ref. 5).
E -> K (in Ref. 3).
i P > K (in Ref. 3).
i P P > K (in Ref. 3).
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GO; GO:0006487; P:N-linked glycosylation; TAS.
InterPro; IPR008952; Tetraspanin.
InterPro; IPR000301; Transmem 4.
Pfam; PF00335; Tetraspannin; T.
PROMIS; PR00259; TMF0UR.
PROMIS; PR00421; TMF0UR.
Antigen; Disease mutation; Glycoprotein; Transmembrane.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Extracellular (Potential)
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Potential.
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01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-MR-2004 (TrEMBLrel. 26, Last annotation update)
O-acetylhomoserine sulfhydrylase (EC 4.2.99.10).
Name=cysD; OrderedLocusNames=bl10245;
use by non-profit institutions as long a
modified and this statement is not removed.
entities requires a license agreement (See Por send an email to license@isb-sib.ch).
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                                                                                                    EMBL; D10653; BAA01501.1; ALT_INIT.
EMBL; D29808; BAA06191.1; ALT_INIT.
                                                                                                                                              AJ250562; CAB65594.1; --
AJ250563; CAB65594.1; JOINED
AJ250564; CAB65594.1; JOINED
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152 GVQNYTNWSTSPYFLEH 168
                                                                                                                                                                                                                                                                                                                EMBL; AB062057; BAB55824.1; -. EMBL; BC018036; AAH18036.1; -.
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AJ250566; CAB65594.1;
AJ250567; CAB65594.1;
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AB062057; BAB55825.1;
                                                                                                                                                                                                                                                                                                                                                       Genew; HGNC:11854; TM4SF2
H-InvDB; HIXO016728; -.
MIM; 300096; -.
MIM; 300210; -.
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249 AA;
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les 9; Conserv
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SEQUENCE FROM N.A.

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Nat. Biotechnol. 22:55-61(2004).

EMBL, BX572607; CAE30031.1; -.

GO, GO.0003961; F.O-acetylhomoserine aminocarboxypropyltransf. ..; IEA.

GO, GO.0006220; Pramino acid metabolism; IEA.

InterPro, IPR000277; Cys Met Meta PP.

InterPro, IPR006235; OAH-OAS_ulffny.

Pfam; PF01033; Cys Met Meta PP: 1.

IIGRFAMS; TIGR01326; OAH-OAS_sulfhy; 1.
                                                                                                                                                                                                                        GO; GO:0016829; Filyase activity; IEA.
GO; GO:0016765; F:transferase activity, transferring alkyl or. . .; IEA.
GO; GO:0016765; F:transferase activity, transferring alkyl or. . .; IEA.
GO; GO:0006520; P:amino acid metabolism; IEA.
InterPro; IPR0006277; CYS Met_Meta_PP.
InterPro; IRR006235; OAH OAS sulfhy.
Pfam; PP01053; CYS Met_Meta_PP; 1.
TIGRFAMS; TIGR01326; OAH_OAS_sulfhy; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=14704707, DOI=10.1038/nbt923;
PubMed=14704707, DOI=10.1038/nbt923;
Darlimer F.W., Chain P., Hauser L., Lamerdin J.E., Malfatti S., Do L.,
Lard M.L., Pelletier D.A., Beatty J.T., Lang A.S., Tabita F.R.,
Gibson J.L., Hanson T.E., Bobst C., Torres y Torres J.L., Peres C.,
Harrison F.H., Gibson J., Harwood C.S.;
"Complete genome sequence of the metabolically versatile
photosynthetic bacterium Rhodopseudomonas palustris.";
Nat. Biotechnol. 22:55-61(2004).
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                                                Kaneko T., Nakamura Y., Sato S., Minamisawa K., Uchiumi T., Sasamoto S., Watanabe A., Idesawa K., Iriguchi M., Kawashima K., Kohara M., Matsumoto M., Shimpo S., Tsuruoka H., Wada T., Yamada M., Tabata S.,
                                                                                                                         "Complete genomic sequence of nitrogen-fixing symbiotic bacterium Bradyrhizobium japonicum USDA110.";
Bradyrhizobium japonicum USDA110.";
Bradyrhizobium japonicum USDA110.";
EMBL; AP005935; BAC45510.1;
HSSP; P13254; 1GC0
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05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
Homocysteine synthase (EC 2.5.1.49).
Name-metY; OrderedLocusNames=RPA4591;
Rhodopseudomonas palustris.
Bracteria: Proteobacteria; Alphaproteobacteria; Rhizobiales;
Bradyrhizobiaceae; Rhodopseudomonas.
NCBI_TaxID=1076;
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Pred. No. 24;
2; Mismatches 3; Indels
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SEQUENCE 434 AA; 46947 MW; B7846EA96BA911FC CRC64;
                                                                                                                                                                                                                                                                                                                                                                    Complete proteome; Lyase. SEQUENCE 433 AA; 46823 MW; 5A4110C4615F70B5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           434 AA
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                                  MEDLINE=22484998; PubMed=12597275;
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Best Local Similarity 61.5%;
Matches 8; Conservative
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Best Local Similarity
Local 8; Conserve
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Q6N118
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Search completed: February 5, 2005, 20:04:42 Job time : 92.1695 secs
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5, 2005, 19:34:18; Search time 104.746 Seconds (without alignments) 73.847 Million cell updates/sec
GenCore version 5.1.6
(c) 1993 - 2005 Compugen Ltd.
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1 KENSAFPPFCCNDNVTNTAN 20
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Gapop 10.0 , Gapext 0.5
                   Copyright
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2105692 Total number of hits satisfying chosen parameters: 88 08

2105692 segs, 386760381 residues

Searched:

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries seq length: 0 seq length: 200000000 Minimum | Maximum |

geneseqp2002s:\* geneseqp2003as:\* geneseqp2003bs:\* geneseqp2004s:\* geneseqp1990s:\* geneseqp2000s:\* geneseqp2001s:\* A\_Geneseq\_16Dec04: geneseqp1980s:\* Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Description	Aam01158	Aau69803	Aag99043	Abu71694	Abb95263	Abr54375	Adb13955	Adg26371	Add69590	Adp81123	Adr65994	Adr66892	Aaw75060	Abo01936	Aag62153	Abb89113	Aaw69386	Aaw59954	Aaw71870	Aaw58380	Aay82003	Abg94412	Aam01118	Aau69764	Aab74801
ID	AAM01158	AAU69803	AAG99043	ABU71694	ABB95263	ABR54375	ADB13955	ADG26371	ADD69590	ADP81123	ADR65994	ADR66892	AAW75060	AB001936	AAG62153	ABB89113	AAW69386	AAW59954	AAW71870	AAW58380	AAY82003	ABG94412	AAM01118	AAU69764	AAB74801
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Query Match	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Score	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116

Aag99003 Human pro Abu71654 Prostate Aab96679 Human AR4 Ab95623 Human ova Ab95623 Human N1- Ab55626 Prostate Ab76666 Prostate Ab76669 Prostate Ab76649 Prostate Ab7564 Human pro Ad51564 Human pro Ad51564 Human pro Ad51569 Prostate Ad51569 Prostate Ad51569 Prostate Ad51569 Prostate Ab656913 Human ova Ad51696 Cancer/an Ab609612 Human TSP Abw01500 Human rec Abb09512 Human TSP Ad416488 S. solfat Ad444848 S. solfat	
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AAG99003 AAB00659 AAB006679 AAB096673 ABB756613 AAB75661 AAB75601 AAB75601 AAB75601 AAB75601 AAB75600 AAB75600 AAB75600 AAB75599 AAB75599 AAB75599 AAB75599 AAB809512 AAB809512 AAB809512 AAB809512	
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27 27 27 27 27 27 27 27 27 27 27 27 27 2	

## ALIGNMENTS

Human prostate-specific peptide used in epitope mapping studies #15. Harlocker SL, Jiang Y, Reed SG; Retter MW, Stolk JA, Skeiky YAW; Human, prostate cancer, prostate-specific, diagnosis, vaccine, cytostatic, gene therapy, metastasis. AAM01158 standard; peptide; 20 AA. 16-JAN-2001; 2001WO-US001574. 14-JAN-2000; 2000US-00483672. (first entry) (CORI-) CORIXA CORP. WO200151633-A2. 04-OCT-2001 19-JUL-2001 AAM01158; Ношо 

Dillon DC, Mitcham JL, MD, Fanger GR, Day CH, Xu J, Dillon DC, Mi Kalos MD, Fanger GR, Wang A, Meagher MJ;

WPI; 2001-425873/45.

New polynucleotide encoding a prostate-specific protein, for diagnosing, monitoring and treating prostate cancer in a patient and for use in vaccines.

Claim 2; Page 399; 543pp; English.

The present invention describes polynucleotide sequences (I) which encode prostate-specific proteins (II). (I) and (II) have cytostatic activity, and can be used in vaccine production and gene therapy. (I), (II), antibodies to (II), fusion proteins comprising (II), and isolated real prepared using (II) are used treat cancer in a patient. (I) and the antibodies are also used in the detection of cancer in a patient. The cancer that is diagnosed or treated is particularly prostate cancer. (I) and (II) can be used in vaccines. The antibodies or (I) can be used for monitoring the progression of cancer in a patient. (I) and construct the detection of cancer in a patient. (I) and construct in also be used to improve diagnostic and therapeutic methods for prostate cancer. They can indicate the level of metastasis as well as the prostate

Length

100.0%; Score 116; DB 4; 100.0%; Pred. No. 3.9e-10;

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antigenic epitopes or domains of prostate specific proteins
                            Sequence 20 AA;
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                                                                                                                                                                                                                                                                                                                   Human; prostate cancer; 88; cytostatic; immunostimulant; tumour; antigen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New human prostate-specific polypeptides and polynucleotides useful for the diagnosis and treatment of cancer, especially prostate cancer.
      volume. AAH93357 to AAH93944 and AAM01115 to AAM01318 represent
polynucleotide and amino acid sequences used in the exemplification of
                                                                                                        Gaps
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Carter D;
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                                                                               Length 20;
                                                                                                       Indels
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                                                                                                                                                                                                                                                                                         Human prostate protein epitope mapping peptide #2
                                                                             ch 100.0%; Score 116; DB 4; I
1 Similarity 100.0%; Pred. No. 3.9e-10;
20; Conservative 0; Mismatches 0;
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                                                                                                                                                                                                                    AAU69803 standard, peptide; 20 AA
                                                                                                                                               1 KENSAFPPFCCNDNVTNTAN 20
                                                                                                                                1 KENSAFPPFCCNDNVTNTAN 20
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29-AUG-2000; 2000US-00651236.
06-SEP-2000; 2000US-0065779.
02-OCT-2000; 2000US-00679426.
10-OCT-2000; 2000US-00685166.
09-NOV-2000; 2000US-00685169.
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09-MAY-2000; 2000US-00568100.
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13-JUN-2000; 2000US-00593793
27-JUN-2000; 2000US-00605783
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                                                                                                                                                                                                                                                                    (first entry)
                                the present invention
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                                                                                 Query Match
Best Local Similarity
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GR, Retter
                                                          Sequence 20 AA;
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Li SX,
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Matches
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The present invention describes an isolated polypeptide (P1) comprising at least an immunogenic portion of a prostate-specific protein, or its variant. Also described are polynucleotides (N1) encoding (P1). (P1) and (N1) have cytostatic activity and can be used in vaccine production. The polypeptides, nucleic acids and antibodies from the present invention are useful in the diagnosis and therapy of prostate cancer. Prostate specific genes P704P, P712P, P774P and 8305D are located in a genomic region on chromosome 22411.2 known as the Cat Eye Syndrome region. Prostate specific antigen (PSA) P501S was located on chromosome 1. AAMB4671 to AAMB5143 and AAG99000 to AAG99077 represent polynucleotide. and polypeptide sequences used in the exemplification of the present invention.
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                                                       Gaps
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                                                         Indels
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, Day CH, Skeiky YAW,
                                                                                                                                                                                                                                                                                                                                                                                                                                    Human prostate-specific epitope mapping peptide #15.
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; Pred. No. 3.9e-10;
0; Mismatches 0;
                                                       0; Mismatches
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Kalos MD, Retter MW, Stolk JA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 3; Page 299; 325pp; English.
                                                                                                                                                                                                                                                                                        AAG99043 standard; peptide; 20 AA
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Best Local Similarity 100.0%;
Matches 20; Conservative 0;
                                                                                                                                     1 KENSAFPPFCCNDNVTNTAN
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Query Match
Best Local Similarity 100.
Marches 20; Conservative
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18-NOV-1999;
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for

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ABB95263 standard; peptide; 20 AA
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01-AUG-1997; 97US-00904804.
25-FBB-1998; 98US-00020956.
25-FBB-1998; 98US-00115453.
25-SEP-1998; 98US-00115453.
25-SEP-1998; 98US-00115453.
25-SEP-1999; 99US-00159812.
25-JAN-1999; 99US-0028946.
213-JUL-1999; 99US-00439413.
21-NOV-1999; 99US-00439413.
21-NOV-1999; 99US-00439313.
21-MAY-2000; 2000US-00568100.
22-MAR-2000; 2000US-00568100.
22-MAY-2000; 2000US-00568100.
22-MAY-2000; 2000US-00568100.
23-MAY-2000; 2000US-00568100.
23-MAY-2000; 2000US-00568100.
23-MG-2000; 2000US-0065783.
21-MAY-2000; 2000US-0065783.
21-MAY-2000; 2000US-00657279.
02-OCT-2000; 2000US-00657279.
                                                                                                                                                                            KENSAFPFCCNDNVTNTAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12-JAN-2001; 2001US-00759143
                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                               Conservative
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MITCHAM J L.
HARLOCKER S I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JIANG Y.
KALOS M D.
FANGER G R.
RETTER M W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STOLK J A.
DAY C H.
VEDVICK T S.
CARTER D.
LI S X.
                                                                                                               Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                     US200202248-A1.
                                                                     Sequence 20 AA;
                                                                                                                                                                                                                                                                                                                                                                               Human; cancer
gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                         Unidentified
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                                                                                                                                                                                                                                                                                         ABB95263;
                                                                                                  Query Match
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(KALO/)
(FANG/)
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(VEDV/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (X033/)
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(HARL/)
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និន្តិនិន្តិនិត្ត
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention describes a fusion protein comprising at least one amino acid sequence of immunogenic portions of any of the 3 sequences not defined in the specification, or sequences having at least 70 or 90 % sequence identity to any one of the 35 sequences defined in the USPTO web site, which is encoded by any of the 4 nucleotide sequences not defined in the specification. The fusion protein, composition and methods are useful for diagnosing, preventing and/or treating cancer, particularly prostate cancer. The proteins are useful as markers to indicate the presence or absence of cancer. This is the amino acid sequence of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Prostate specific protein and its encoding polynucleotide, useful for the treatment and diagnosis of prostate cancer.
                                                                                                                                                                   Prostate cancer; vaccine; gene therapy; cytostatic; fusion protein; immunogen; cancer; prostate specific antigen; PSA; prostatic acid phosphatase; PAP; prostate specific membrane antigen; PSMA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kalos MD;
Carter D;
Hural J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dillon DC, Mitcham JL, Harlocker SL, Jiang Y, GR, Retter MW, Stolk JA, Day CH, Vedvick TS, Wang A, Skeiky YAW, Heplar WT, Henderson RA, PW, Houghton RL, Y De Bassolscv, Foy TM;
                                                                                                                                        Prostate cancer therapy associated peptide #16.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 18; SEQ ID NO 505; 85pp; English.
                                                    ABU71694 standard; peptide; 20 AA
                                                                                                                                                                                                                                                                                                                                                           04-OCT-1999; 99US-0157455P.
04-OCT-2000; 2000US-00679272.
28-MAR-2001; 2001US-00822827.
                                                                                                                                                                                                                                                                                                                                29-JUN-2001; 2001US-00895793
                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MCNEILL P D.
HOUGHTON R L.
Y DE BASSOLS C V.
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RETTER M W.
STOLK J A.
DAY C H.
VEDVICK T S.
CARTER D.
LI S X.
WANG A.
SKEIKY Y A W.
HEPLER W T.
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DILLON D C.
MITCHAM J L.
HARLOCKER S I
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FOY T M.
                                                                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fanger GR, R
Li SX, Wang
Mcneill PD,
                                                                                                              10-JUN-2003
                                                                                                                                                                                                                                                                                                     19-DEC-2002
                                                                                ABU71694;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (MCNE/) (HOUG/) (DBAS/) (FOYT/)
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(DILL/)
(MIRL/)
(HARL/)
(JIAN/)
(FANG/)
(HEND/)
(HEND/)
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                                        ABU71694
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cancer; prostate cancer; vaccine; cytostatic; immunostimulant;
                                                                                                                                                                                                                                                                                     Gaps
prostate cancer therapy associated peptide. Note: The sequence data this patent did not form part of the printed specification, but was obtained in electronic format directly from the US patent office at seqdata.uspto.gov/sequence.html?DocID=US20020192763
                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                     100.0%; Score 116; DB 4; Length 20; 100.0%; Pred. No. 3.9e-10;
                                                                                                                                                                                                                                                                                  Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Epitope mapping study peptide SEQ ID NO 505.
                                                                                                                                                                                                                                                                                  0; Mismatches
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Gaps

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0; Mismatches

20

Length 20; Indels

(MANG/)

Xu J,

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Human; prostate specific cDNA; cytostatic; immunostimulant; gene therapy; cell therapy; vaccine; T-cell epitope; class I major histocompatibility complex allele; MHC; prostate cancer; tumour; antigen presenting cell; epitope.
                    The present invention relates to novel prostate-specific proteins (PSP) and their coding sequences are useful for stimulating an immune response in a patient, or for treating prostate cancer in a patient and for determining, detecting or diagnosing the presence of a cancer in a patient. The present sequence was used to
                                                                                                                                                                                                                                                                                                                                                                                                                                              Human prostate protein P503S epitope mapping peptide #2102.
                                                                                                                                                                        100.0%; Score 116; DB 6; 100.0%; Pred. No. 3.9e-10;
Example 18; Page 466; 691pp; English.
                                                                                                                                                                                                                                                                                                                                                         ADB13955 standard; peptide; 20 AA
                                                                                                                                                                                                                                          1 KENSAFPPFCCNDNVTNTAN 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000US-00693793.
2000US-00605783.
2000US-00636215.
2000US-00651236.
2000US-0067279.
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2001US-00895814.
2001US-00012896.
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97US-00904804.
98US-00030605.
98US-00115453.
98US-00115453.
99US-00159812.
99US-00288946.
99US-00352616.
99US-00439313.
                                                                                                                                                                                                                                                           1 KENSAFPPFCCNDNVTNTAN
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2000US-00568100.
2000US-00570737.
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                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                             Conservative
                                                                                                                illustrate the invention
                                                                                                                                                                     Query Match
Best Local Similarity
Matches 20; Conserval
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US2003185830-A1.
                                                                                                                                              Sequence 20 AA;
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13-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27-MAR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             L2-JAN-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                        18-DEC-2003
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                                                                                                                                                                                                                                                                                                                                                                                           ADB13955;
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                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                           The present invention provides prostate-specific coding sequences and their encoded proteins. These can be used in the diagnosis and treatment of cancers, particularly prostate cancer. The present sequence is a peptide described in the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prostate tumour specific related peptide for epitope mapping SEQ ID 505.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Xu J, Dillon DC, Mitcham JL, Harlocker SL, Jiang Y, Henderson RA; Kalos MD, Fanger GR, Retter MW, Stolk JA, Day CH, Vedvick TS; Carter D, Li SX, Wang A, Skeiky YAW, Hepler WT, Hural J; Mcneill PD, Houghton RL, Vinals Y De BassolsC, Foy TM, Watanabe Y;
                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                   Kalos MD;
Carter D;
                                                                                                                                                                          New prostate-specific polynucleotides for diagnosing and treating diseases, in particular prostate cancer, and as markers for the progression of cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cytostatic; gene therapy; prostate-specific protein; PSP; human; immune response; prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                           100.0%; Score 116; DB 5; Length 20; 100.0%; Pred. No. 3.9e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                 billon DC, Mitcham JL, Harlocker SL, Jiang Y, 3R, Retter MW, Stolk JA, Day CH, Vedvick TS, Wang A, Skeiky YAW, Hepler WT, Henderson RA;
                                                                                                                                                                                                                                                                                                                                                                                                                               0; Mismatches
                                                                                                                                                                                                                                                   Claim 2; SEQ ID NO 505; 87pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ABR54375 standard; protein; 20 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 KENSAFPPFCCNDNVTNTAN 20
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29-JUN-2001; 2001US-00895814.
10-DEC-2001; 2001US-00012896.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          09-MAY-2002; 2002WO-US014753.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity 100.
20; Conservative
                                                                                                    Fanger GR, Retter MW,
Li SX, Wang A, Skeiky
      WANG A.
SKEIKY Y A W.
HEPLER W T.
                                                        HENDERSON R A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2003-167130/16.
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                                                                                                                                                     WPI; 2002-255649/30.
                                                                                      Dillon DC,
                                                                                                                                                                                                                                                                                                                                                                   Sequence 20 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200289747-A2
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                       (SKEI/) 8
(HEPL/) 1
(HEND/) 1
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Deng

Local

Matches

ð 엄 RESULT ABR543 2002US-00144678

09-MAY-2002;

21-AUG-2003

US2003157089-A1.

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The invention relates to an isolated polypeptide comprising no more than 11-542 amino acids of ADB1353 comprising a sequence ADB1487. The peptides comprise a fragment ADB13563 of that contain naturally processed T-cell epitopes for 3 class I major histocompatibility complex (MEC) alleles. ADB13563 is a polypeptide encoded by a human prostate specific cDNA, one of 648 disclosed as new. Also included are nuclaic acids encoding the proteins and peptides, expression vectors, a host cell cDNA, one of 648 disclosed as new. Also included are nuclaic acids encoding the proteins and peptides, expression vectors, a host cell transformed with the vector, an isolated antibody (or antigen binding content that binding agent that binds to the protein or peptide, detecting the presence of a cancer that binds to the protein or peptide, detecting the agent and comparing the amount of polypeptide or a polypeptide or a peptide or a polypeptide or a peptide or a tumour protein comprising contacting a patient comprising the peptides or proteins, stimulating or expanding T cells of peptides or the isolated T cell population, treating prostate cancer in a patient and treating prostate cancer in a patient with the peptides or compounds, determining the presence of a cancer in a patient with the peptides or ontiferate, and administering the protiferated T cells proliferate, and administering the presence of cancer in a patient. The peptides for an oligonucleotide that hybridises to nucleic acid encoding them), is used to detect the presence of antigen-presenting cells expressing the nucleic acid, are used to stimulate or expand T cells specific for a tumour protein. The peptides, uncleic acids, antibodies, fusion proteins, T cell populations or antigen presenting cells are used to stimulate or expand T cells specific for a tumour protein. The peptides of the prostate cancer in a patient. The present sequence of a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  invention. Note: Except where otherwise indicated, the sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from USPTO at
                                                                                                                                                          New isolated polypeptide for use in a vaccine for stimulating an immune response, or for treating or diagnosis cancer, preferably prostate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    segdata.uspto.gov/sequence.html?DocID=20030185830
                                                                                                                                                                                                                                                                 Example 18; Page; 101pp; English.
                                                     Stolk JA, Kalos MD;
(CORI-) CORIXA CORP.
                                                                                                          WPI; 2003-756193/71.
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                                                     Xu J,
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Gaps ö Length 20; Indels 0 Score 116; DB 7; Pred. No. 3.9e-10; Mismatches ö 100.08; 100.08; Conservative Query Match Best Local Similarity Local 20; Conserve

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1 KENSAFPPFCCNDNVTNTAN

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RESULT 8 ADG2637

(first entry) 26-FEB-2004 ADG26371; SXXXXXXXXXX

ADG26371 standard; peptide; 20 AA

Human prostate-specific polypeptide #44.

Human; prostate-specific polypeptide; prostate cancer; cytostatic.

Homo sapiens

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98US-00030607.
98US-00115453.
98US-00135812.
99US-00288946.
99US-00358616.
99US-00439313.
                                                                                            2000US-00593793.
2000US-00605783.
2000US-00636215.
                                                                           2000US-00483672
                                                                              2000US-00536857
2000US-00568100
                                                                                                        2000US-00651236
2000US-00657279
                                                                                                                             2001US-00759143.
2001US-00780669.
                                                                                        2000US-00570737
                                                                                                                 2000US-00679426
                                                                                                                     2000US-00685166
                                                                                                                                              2001US-00012896
                                                                                       12-MAY-2000;
                                                                                            -JUN-2000;
                                                                                                27-JUN-2000;
                                                                                                    09-AUG-2000;
                                                                                                        29-AUG-2000;
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(CORI-) CORIXA CORP.

, Jiang Y, Hender, , Day CH, Vedvick TS; oler WT, Hural J; Henderson RA; JA, LL, Hepler WT, Hural Xu J, Dillon DC, Mitcham JL, Harlocker SL, Ji. Kalos MD, Fanger GR, Retter MW, Stolk JA, Day Carter D, Li SX, Wang A, Skeiky YAW, Hepler W Moneill PD, Houghton RL, Vinals Y De BassolsC, Deng T; Carter D, Li Mcneill PD, Meagher MJ,

WPI; 2003-777973/73.

New polynucleotides encoding prostate specific polypeptides isolated from a human prostate tumor cDNA library are useful to diagnose and treat cancer particularly prostate cancer.

Example 18; SEQ ID NO 505; 99pp; English.

The invention relates to human prostate-specific polypeptides and the polynucleotides encoding them. The invention also relates to an isolated antibody or its antigen-binding fragment that specifically binds a polypeptide of the invention, a method of detecting cancer in a patient that binds a prostate-specific polypeptide and comparing the amount of bound polypeptide compared to a predetermined cut-off value and a fusion protein comprising a prostate-specific polypeptide. The sequences of the invention are used to diagnose and treat cancer, particularly prostate cancer. This sequence represents a human prostate-specific polypeptide of the invention. Note: The sequence data for this patent did not form part of the printed specification but was obtained in electronic format directly from USPTO at sequence.html.

Sequence 20 AA;

Gaps ö 100.0%; Score 116; DB 7; Length 20; 100.0%; Pred. No. 3.9e-10; ive 0; Mismatches 0; Indels Local Similarity 100.0 ses 20; Conservative Query Match Matches

1 KENSAFPPFCCNDNVTNTAN 20

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ADD69590 standard; protein; 172 AA
KENSAFPPFCCNDNVTNTAN 20
                      Human REMAP protein - SEQ ID 19.
                   (first entry)
                   15-JAN-2004
               ADD69590;
         RESULT
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antiarteriosclerotic; anticonvulsant; nootropic; neuroprotective; cerebroprotective; anti-HIV; antiallergic; antiinflammatory; cerebroprotective; anti-HIV; antiallergic; antiinflammatory; thyronimetic; cell proliferative; cancer; atherosclerosis; neurological; epilepsy; Huntington's disease; stroke; immune; inflammatory; AIDS; allergy; developmental; hypothyroidism; Cushing's syndrome; infection. human; receptor and membrane-associated protein; REMAP; cytostatic;

Нощо варіепв

WO2003048305-AZ.

12-JUN-2003

13-NOV-2002; 2002WO-US036759

13-NOV-2001; 2001US-0333097P. 15-NOV-2001; 2001US-033274P. 14-DEC-2001; 2001US-0340542P. 18-DEC-2001; 2001US-0342166P. 11-JAN-2002; 2002US-0347869PP.

(INCY-) INCYTE GENOMICS INC.

14-JAN-2002;

Duggan BM, Yang J, Gietzen KJ, Lee SY, Tang YT, Azimzai Y; Chawla NK, Warren BA, Barroso I, Becha SD, Yue H, Lehr-Mason PM; Thangavelu K, Lee S, Emerling BM, Kable AE, Khare R, Baughn MR, Gandhi AR, Tran UK, Richardson TW, Marquis UP, Lal PG, Forsythe IJ; Lee BA, Swarnakar A, Kallick DA, Griffin JA, Elliott VS, Gorvad AE; Hafalia AJA, Ison CH, Jin P, Jiang X, Jackson AA, Bhatia U; Burrill JD, Blake JJ, Ho A, Zheng W, Gao J;

WPI; 2003-513744/48. N-PSDB; ADD69637.

New human receptors and membrane-associated proteins (REMAP), useful for diagnosing, treating and preventing diseases or conditions associated with the aberrant REMAP expression e.g. cancer, AIDS, atherosclerosis, or infections.

Claim 1; SEQ ID NO 19; 298pp; English.

The invention relates to a novel isolated polypeptide comprising a human receptor and membrane-associated protein (REMAP). The polypeptide of the invention demonstrates cytostatic, antiarteriosclerotic, anticonvulsant, notropic, neuroprotective, cerebroprotective, and i-HIV, antiallergic, antiinflammatory and thyromimetic activities and may be useful for treating and diagnosing various disorders including those which are cell proliferative such as cancer and atherosclerosis, neurological including particularly HUMISTON's disease and stroke, immune/inflammatory particularly AIDS and allergies and developmental such as hypothyroidism and Cubhing's syndrome, as well as infections. The current sequence is that of the human REMAP protein of the invention.

Sequence 172 AA;

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                                              Gaps
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Query Match
100.0%; Score 116; DB 7; Length 172;
Best Local Similarity 100.0%; Pred. No. 3.5e-09;
Matches 20; Conservative 0; Mismatches 0; Indels (
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Sequence 174 AA;

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The invention relates to novel isolated nucleic acid molecules and comprise a nucleic acid sequence encoding any of the 167 amino acid comprise a nucleic acid sequence encoding any of the 167 amino acid comprise a nucleic acid sequence encoding any of the 167 amino acid sequences (e.g. 438, 237 or 233 amino acids) fully defined in the comprises and the specification (SEQ. ID NOS: ADP81055 to ADP81261) and comprises any of the 128 nucleotide sequences (e.g. 4798, 1494 or 1691 bp) fully defined the specification (SEQ. ID NOS: ADP80055 to ADP81094). The invention further comprises: a method for determining the presence of a ovarian specific nucleic acid molecule; a host cell comprising the vector comprising the above nucleic acid molecule; a polypeptide encoded by the nucleic acid molecule cited above; an antibody or jet fragment that specifically binds to the above polypeptide; a method for determining the presence of an ovarian specific protein in a method for determining the presence of an ovarian specific protein in a cample; a method for determining the presence of an ovarian specific acid molecule or polypeptide; a method of treating a patient, the kit comprising a means for concern in a patient, the kit comprising a means for polypeptide; a method of treating a patient with ovarian cancer; and a polypeptide or in a patient with ovarian cancer; and a concern and polypeptides may be used to create a cytostatic activity. The isolated polypeptides may be used to create a concern in the solated polypeptides may be used to create a cancer and treating ovarian cancer. This sequence represents the protein cancer and treating ovarian cancer. This sequence represents the protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New ovarian specific nucleic acid molecules and polypeptides useful for diagnosing, preventing or treating ovarian cancer, for producing transgenic animals or cells, or for research purposes.
                                                                                                                                                                                                                                                                     normal; neoplastic; ovarian; ovarian specific nucleic acid; OSNA; metastatic; cancer; vaccine; cytostatic; human.
                                                                                                                                                                                                                                 Protein of human ovarian specific gene, SEQ ID No 157.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chen H;
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                                                                                                                 ADP81123 standard; protein; 174 AA
Sun Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-DEC-2002; 2002US-0431301P.
06-DEC-2002; 2002US-0431321P.
30-JUN-2003; 2003US-0484584P.
07-NOV-2003; 2003US-0518607P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-DEC-2003; 2003WO-US038855
                                                                                                                                                                                                 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (DIAD-) DIADEXUS INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2004-468850/44.
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                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
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                                                                                                                                                                                                 09-SEP-2004
                                                                                                                                                           ADP81123;
                                                                                RESULT 10
                                                                                                     ADP81123
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sequentially with anti-human CD4 murine monoclonal antibodies;

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This invention describes novel cytoscatic polymuciectice and polypeptiue sequences which can be used in a method for diagnosing prostatic cancer. Diagnosis is based on or the risk of developing prostatic cancer. Diagnosis is based on determining over transcription or over expression of the sequences in prostatic tissue. Screening for inhibitors of the sequences or detection substances involves a binding assay, any compounds that bind are selected, optionally after deconvolution of mixtures. Detection of a predetermined minimum level of the reporter indicates the presence of tumour cells. Inhibitors can be chosen from antisense oligonucleotides, short-interfering RNA or ribozymes; an organic molecule of molecular short balow 8000, preferably 300, that binds to the polympetide; an aptamer against the polypeptide; a (monoclonal) antibody (Ab) against the polypeptide; a (monoclonal) antibody directed against Ab or any of the above derivatised with a reporter group, cell toxin, immunostimulatory molecules and/or radioisocope. The polymucleotides are identified in human prostatic cancer by differential expression analysis, using DNA microarrays, cheween normal and tumorous tissues, with (over) expression being detected by quantitative PCR. Analysis of prostatic cancer samples showed that cobstatic cancer patients, or subjects at risk, were incubated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rosenthal A, Hermann K, Pilarsky C, Specht T; 3, Bruemmendorf T, Kinnemann H, Roepcke S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New nucleic acids, and encoded proteins, from prostatic cancer tissue, useful for diagnosis, treatment and in screening for specific binding
                                          Gaps
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0
     Length 174;
                                        Indels
                                                                                                                                                                                                                                                                                                                    Human prostatic carcinoma derived protein SEQ ID 190 #1.
     Score 116; DB 8;
Pred. No. 3.6e-09;
                                                                                                                                                                                                                                                                                                                                                      human; cytostatic; diagnosis; prostatic cancer; differential expression analysis.
                                      Mismatches
                                                                                                                                                                                                       ADR65994 standard; protein; 214 AA
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                                                                                               53 KENSAFPPFCCNDNVTNTAN 72
                                                                          1 KENSAFPPFCCNDNVTNTAN 20
Query Match
Best Local Similarity 100.0%; Pr
Matches 20; Conservative 0;
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14-MAY-2003; 2003DE-01022134.
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Beckmann G
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Xinzhong L,
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                          biotinylated second antibody, streptavidin-conjugated horseradish peroxidase and then diaminobenzidine as colour former (brown). The samples were counterstained with hemalum (blue). Malignant cells stained strongly but non-malignant cells only weakly. In 15 of 63 samples of adenocarcinoma, membrane and cytoplasmic staining was very strong, and lymph node metastases were also stained. ADR65805-ADR66954 represent the polymucleotide and polypeptide sequences used in the method of the
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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                                                                                                                                                                                                                                                                                                                                                                                Score 116; DB 8;
Pred. No. 4.4e-09;
; Mismatches 0;
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100.0%;
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Best Local Similarity 100.
Matches 20, Conservative
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ROSENTHAL A.
HERMANN K.
PILARSKY C.
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                                                                                                                                                                                                                                                                                                                    Sequence 214 AA;
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                                                                                                                                                                                                                                                     invention.
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(HERM/)
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9705-005661P-
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97US-0043576P.
97US-0043578P.
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97US-0043314P.
97US-0043315P.
97US-0043568P.
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      weight below 5000, preferably 300, that binds to the polypeptide; an aptemer against the polypeptide; a (monoclonal) antibody (Ab) against the polypeptide, a (monoclonal) antibody (Ab) against the polypeptide, preferably humanised or human; an anti-idiotype, non-human (monoclonal) antibody directed against Ab or any of the above derivatised (monoclonal) antibody directed against Ab or any of the above derivatised with a reporter group, cell toxin, immunostimulatory molecules and/or radioisotope. The polynucleotides are identified in human prostatic cancer by differential expression analysis, using DNA microarrays, concer by differential expression analysis, using DNA microarrays, between normal and tumorous tissues, with (over) expression being detected by quantitative PCR. Analysis of prostatic cancer samples showed that correct as upreglated in many of them. Sections of tissue, isolated from prostatic cancer patients, or subjects at risk, were incubated corrected and them diaminobenzialin-conjugated horseradish contextained with hemalum (blue). Malignant cells stained surongly but non-malignant cells only weakly. In 15 of 63 samples of strongly but non-malignant cells only weakly. In 15 of 63 samples of cadenocarcinoma, membrane and cytoplasmic staining was very strong, and lymph node metastasses were also stained. ADR65805-ADR66954 represent the invantion
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; secreted protein; fusion protein; gene therapy; protein therapy; diagnosis; tissue; cancer; tumour; neurodegenerative disorder; leukaemia; developmental abnormality; foetal deficiency; blood; allergy; renal; immune system; asthma; lymphocytic disease; brain; hepatic; lymphoms; inflammation; ischaemic shock; Alzheimer's disease; restenosis; AIDS; cognitive disorder; schizophrenia; prostate; obesity; osteoclast; thymus; osteoprosis; arthritis; testis; lung; thyroiditis; thyroid; digestion; endocrine; metabolism; regulation; malabsorption; gastritis; neoplasm.
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                                                                                                                                                                                                                                                                                            Length 214;
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Best Local Similarity 100.0%; Pred. No. 4.4e-09;
Matches 20; Conservative 0; Mismatches 0;
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(first entry)
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                                                                                                                                                                                                                                                                          Sequence 214 AA;
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07-MAR-1997;
07-MAR-1997;
11-APR-1997;
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07-MAR-1997;
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97US-0056887P 97US-0056888P

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wound, burn, incision, ulcer, age disease, osteoporosis, periodontal disease, liver failure, catabolism, anabolism, metabolism, food additive, preservative, secreted protein.
     head trauma; stroke; tissue regeneration; congenital defect; trauma;
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970S-0040162P

970S-0040338P

970S-00403331P

970S-00403312P

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970S-0043312P

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97US-0047618P.
97US-0047633P.
97US-0048964P.
97US-0048974P.
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22-AUG-1997;
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                                                                                                                                                                                                                                                                                                                                                                                    This sequence represents a secreted human protein encoded by the gene clone detailed in the descriptor line. The gene can be used to generate fusion proteins by linking to the gene to a human immunoalboulin Rc portion (e.g. AAV3418) for increasing the stability of the fused protein as compared to the human protein only. The invention relates to 70 novel genes and their fragments (nucleic acid sequences AAV34164-V34276; amino acid sequences AAW35657-W7519) which are useful for preventing, treating or ameliorating medical conditions e.g. by protein or gene therapy. Also, pathological conditions can be disagnosed by determining the amount of the new polypeptides in a sample or by determining the presence of mutations in the new polymucleotides. Specific uses are described for each of the polymucleotides, based on which tissues they are most highly expressed in (see AAV34154 for described uses). (Updated on 25-MAR-2003 to correct Pf field.)
                                                                                                                                                                                           Ruben SM, Rosen CA, Fischer CL, Soppet DR, Carter KC;
Bednarik DP, Endress GA, Yu G, Ni J, Feng P, Young PE, Greene JM;
Ferrie AM, Duan R, Hu J, Florence KA, Olsen HS, Ebner R, Brewer LA;
Moore PA, Shi Y, Lafleur DW, Li Y, Zeng Z, Kyaw H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; immunoglobulin G; IgG; fragment of crystallisation; Fc; immune system disorder; haematopoietic cell disorder; immunologic deficiency disorder; ataxia telangiectasia; HIV infection; wiskott-Aldrich disorder; thrombocytopenia; haemoglobinuria; blood coagulation disorder; blood platelet disorder; autoimmune disorder; blood platelet disorder; autoimmune disorder; Addison's disease; haemolytic anaemia; rheumatoid arthritis; dermatitis; glomerulonephritis; Grave's disease; allergic reaction, graft-versue-host disease; happerproliferative disorder; neoplasm; infectious disease; nervous system disease; spinal cord disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                     New isolated human genes and the secreted polypeptides they encode useful for diagnosis and treatment of e.g. cancers, neurological disorders, immune diseases, inflammation or blood disorders.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
100.0%; Score 116; DB 2; Length 233;
Best Local Similarity 100.0%; Pred. No. 4.8e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0
                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 281-282; 447pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABO01936 standard; protein; 233 AA
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970S-0056899P-
970S-0056892P-
970S-0056893P-
970S-0056908P-
970S-0056908P-
970S-0056908P-
970S-0056910P-
970S-0056911P-
970S-0056911P-
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                                                                                                                                                                  (HUMA-) HUMAN GENOME SCI INC
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N-PSDB; AAV34157.
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ROSEN C A.
FISCHER C L.
SOPPET D R.
CARTER K C.
BEDNARIK D R.
ENDRESS G A.
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NI J.
FENG P.
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FERRIE A M.
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EBNER R.
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FLORENCE K
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Fischer CL, Soppet DR, Carter KC; 18 GA, Yu G, Ni J, Peng P, Young PE, Greene JM; Hu J, Florence KA, Olsen HS, Ebner R, Brewer LA; Rosen CA, R, Endress ( 'DR, bire-aM, Duan R, Perrie AM, Ruben SM, **3ednarik** Shi Y;

WPI; 2003-466138/44. N-PSDB; ACD08028. Novel isolated human secreted HODAZ50 polypeptide useful for diagnosing or treating deficiencies or disorders of the immune system, autoimmune disorders, hyperproliferative disorders, and infectious diseases.

Claim 11; Page 173; 243pp; English.

The invention describes an isolated human secreted HODAZ50 polypeptide (I) comprising a sequence at least 95% identical to a sequence selected from polypeptide fragment of any one of the 123 polypeptide sequences

WPI; 2001-328324/34.

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cc (PS) fully defined in the specification and having biological activity, cc polypeptide domain or epitope of PS, secreted form of PS, full-length polypeptide domain or epitope of PS, secreted form of PS, full-length poctain of PS, or variant, allelic variant or appeliate homologue of PS.

(I) or a polymucleotide (II) encoding (I) is useful for preventing, or ameliorating a medical condition in a mammalian subject. (I) cor (II) is also useful for diagnosing a pathological condition or a consceptibility to a pathological condition in a subject. (I) is useful for identifying a binding partner which involves contacting the partner affects the activity of the polypeptide. (I) or (II) is useful for diagnosing or treating deficiencies or disorders of the immune for diagnosing or treating deficiencies or haematopoietic cells, to treat immunologic deficiency disorders, thrombocytopenia or heamaglobinuria, blood patchet disorders, autoimmune disorders is pascertal and partners. The pascertal disorders, blood platelet disorders, autoimmune disorders (e.g., Addison's disease, hyperboliferative disorders (e.g., partners), or derentials, glomerulonephritis, Grave's disease), allergic reactions, darterioneum, endocrine glands), infectious diseases (e.g., viral, peritoneum, endocrine glands), infectious diseases (e.g., viral, peritoneum, endocrine glands), infectious diseases (e.g., viral, corterial, fungal or parasitic infection), central and peripheral nervous cortect proliferate and attract cells leading to the regeneration of tiseases to repair, replace or protect tissue damaged by congenital cetterpolities proliferate and attract cells leading to the regeneration, defectors, trauma (wounds, burns, incisions, or ulcers) age disease (e.g., cateoporosis, peritodontal disease, liver failure) or surgery. (I) or (IV) or teleformance of energy, to change a mammal's mental state or physical state, or as a food additive or preservative, such as to increase or decrease cortected protein carded propersis, mental subjects or the am
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; Score 116; DB 6; 100.0%; Pred. No. 4.8e-09; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human P503S inventive antigen SEQ ID NO: 352
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Matches 20; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 233 AA;
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Polypeptide comprising part of the Wilms Tumor gene product sequence is used in the diagnosis and treatment of malignant diseases e.g. leukemia and cancer associated with WTI.

Disclosure; Page 223-224; 228pp; English.

The present invention describes compositions comprising peptides derived from the Wilm's tumour protein WT1 and methods for their use in treating malignant diseases. Peptides derived from both the murine and human WT1 proteins are provided. The human WT1 gene is found on chromosome 11p13, and the protein was shown to be a zinc finger transcription factor. The immunogenic Deptides of the invention are particularly useful in the diagnosis and treatment of cancer and leukaemia. The present sequence is a polypeptide described in the exemplification of the invention

Sequence 240 AA;

Query Match
100.0%; Score 116; DB 4; Length 240;
Best Local Similarity 100.0%; Pred. No. 5e-09;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps

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# ALIGNMENTS

Sequence 77, Appl Sequence 11, Appl Sequence 114, Appl Sequence 324, Appl Sequence 20, Appl Sequence 20, Appl Sequence 189981, Sequence 74, Appl Sequence 76, Appl

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Minimum DB seq length: 0 Maximum DB seq length: 200000000

Sequence 21, Appl Sequence 1, Appli Sequence 39257, A Sequence 249829, Sequence 58, Appli Sequence 3, Appli

US-09-864-761-39257 US-10-424-599-249829

Sequence 22,

Harlocker, Susan L.

Jiang, Yuqui

APPLICANT: Jiang, Yuqui

APPLICANT: Ralos, Robert A.

APPLICANT: Renger, Gary R.

APPLICANT: Retter, Marc W.

APPLICANT: Stolk, John A.

APPLICANT: Stolk, Thomas S.

APPLICANT: Oby, Craig H.

APPLICANT: Oby, Craig H.

APPLICANT: Li, Samuel

APPLICANT: Li, Samuel

APPLICANT: William

ITILE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND

TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER

FILE REFERENCE: 210121.437C23

CURRENT APPLICATION NUMBER: US/09/759,143

CURRENT PILING DATE: 2001.12

SEQ ID NOS 505

LENGTH: 20

TTYPE: POPT

TTYPE: POP Sequence 505, Application US/09759143 · Patent No. US20020022248Al GENERAL INFORMATION: ; OTHER INFORMATION: Made in a lab US-09-759-143-505 TYPE: PRT ORGANISM: Artificial Sequence FEATURE: US-09-759-143-505

Published Applications AA:\*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	App	App	App	App	App	App ,	App ,	App,	App,	App	App ,	9, AD	App
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Description	Seguence	Sequence	Sequence	Sequence	Sequence	Sequence	Sequence 505,	Sequence	Sequence	Sequence	Seguence	Sequence 1489,	Sequence 114, App
ΩΙ	US-09-759-143-505	JS-09-780-669-505	JS-09-822-827-505	JS-09-895-793-505	JS-09-895-814-505	US-10-012-896-505	US-10-010-940-505	US-10-144-678A-505	US-10-294-025-505	JS-09-981-876-137	US-09-148-545-137	US-10-264-237-1489	US-09-759-143-114
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& Query Match	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Score	116	116	116	116	116	116	116	116	116	116	116	116	116
Result No.	<b>-</b>	7	٣	4	S	9	7	80	6	10	11	12	13

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Gaps

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Length 20; Indels

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APPLICANT: "1, "LIBERAPY R. TITLE OF INVENTION: CAMPOSITIONS AND METHODS FOR THE THERAPY AND TITLE OF INVENTION: COMPOSITIONS OF PROSTATE CANCER FILE REPERENCE: 210121.534C2 CURRENT APPLICATION NUMBER: US/09/895,793 CURRENT APPLICATION NUMBER: US/09/895,793 CURRENT FILING DATE: 2001-06-29 NUMBER OF SEQ ID NOS: 982 SOFTWARE: FastSEQ for Windows Version 3.0 LENGTH: 20
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Best Local Similarity 100.0%; Pred. No. 1.3e-10;
Matches 20; Conservative 0; Mismatches 0;
                                                                                                                                            100.0%; Score 116; DB 9;
100.0%; Pred. No. 1.3e-10;
:ive 0; Mismatches 0;
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McNeill, Patricia D.
Houghton, Raymond L.
Vinals de Bassols, Carlota
Foy, Teresa
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                                                                                                                                                                                                                                                                                                                                                                                         Sequence 505, Application US/09895793
Publication No. US20020192763A1
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APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan L.
APPLICANT: Jiang, Yuqiu
APPLICANT: Kalos, Michael D.
APPLICANT: Ralos, Michael D.
APPLICANT: Retter, Marc W.
APPLICANT: Stolk, John A.
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                                                              ) FEATURE:
; OTHER INFORMATION: Made in a lab
US-09-822-827-505
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                    TYPE: PRT
ORGANISM: Artificial Sequence
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Vedvick, Thomas S.
Carter, Darrick
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Skeiky, Yasir A.W.
Hepler, William T.
                                                                                                                                                 Query Match
Best Local Similarity 100.
Matches 20; Conservative
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US-09-895-814-505
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LENGTH: 20
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APPLICANT: Wang, Aijun

APPLICANT: Hepler, William

APPLICANT: Hepler, William

APPLICANT: Houghton, Raymond L.

APPLICANT: Houghton, Raymond L.

TITLE OF INVENTION: DIACNOSIS OF PROSTATE CANCER

TITLE OF INVENTION: DIACNOSIS OF PROSTATE CANCER

TITLE OF INVENTION: US/09/780,669

CURRENT APPLICATION NUMBER: US/09/780,669

CURRENT FILING DATE: 2001-02-09

NUMBER OF SEQ ID NOS: 943

SOFTWARE: FASESEQ for Windows Version 3.0

LENGTH: 20
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GENERAL INFORMATION:

APPLICANT: Xu, Jiangchun

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND

TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER

TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER

CURRENT APPLICATION UNUMBER: US/09/822,827

CURRENT FILING DATE: 2001-03-28

SOFTWARE: FASTESQ for Windows Version 3.0

SEQ ID NO 505
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                       Length 20;
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                                                                0; Indels
                       Query Match
100.0%; Score 116; DB 9;
Best Local Similarity 100.0%; Pred. No. 1.3e-10;
Matches 20; Conservative 0; Mismatches 0;
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Patent No. US20020081680A1
                                                                                                                                                                                                                                                                  ; Sequence 505, Application US/09780669
; Patent No. US20020051977A1
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US-09-780-669-505
                                                                                                                                                                                                                                                                                                                                  Xu, Jiangchun
Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
Jiang, Yuqui
Henderson, Robert A.
Kalos, Michael D.
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Retter, Marc W.
Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
Li, Samuel
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 100..
Best Local Similarity
Lange 20; Conservative
                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Xu, Jian
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US-09-780-669-505
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Gaps

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APPLICANT: Xu, Jiangchun

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Gaps
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    APPLICANT: Meagher, Madeleine Joy
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFERENCE: 210121.427C27
CURRENT APPLICATION NUMBER: US/10/012,896
CURRENT FILING DATE: 2001-12-10
NUMBER OF SEQ ID NOS: 1011
SEQ ID NO 505
LENGTH: 20
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APPLICANT: Mitcham, Janin C.
APPLICANT: Mitcham, Janin C.
APPLICANT: Mitcham, Janin Er.
APPLICANT: Mitcham, Janin Fer L.
APPLICANT: Marcham, Janin Yuqui
APPLICANT: Ralos, Michael
APPLICANT: Ralos, Michael
APPLICANT: Ralos, Michael
APPLICANT: Ralos, Michael
APPLICANT: Releter, Mark
APPLICANT: Releter, Mark
APPLICANT: Releter, Mark
APPLICANT: Caig
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THERAPY AND
TITLE OF INVENTION: COMPOSITIONS OF PROSTATE CANCER
TITLE OF INVENTION: UDAGNOSIS OF PROSTATE CANCER
TITLE OF INVENTION: UDAGNOSIS OF PROSTATE CANCER
TITLE OF INVENTION: UDAGNOSIS OF PROSTATE
CURRENT PELICANT APPLICATION NUMBER: US/10/010,940
CURRENT FILING DATE: 2001-12-05
NUMBER OF SEQ ID NOS: 575
SOFTWARE: FastESQ for Windows Version 3.0
LENGTH: 20
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ilarity 100.0%; Pred. No. 1.3e-10;
Conservative 0; Mismatches 0;
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US-10-144-678A-505
US-10-144-678A-505
Sequence 505, Application US/10144678A
Publication No. US20030157089A1
GENERAL INFORMATION:
APPLICANT: Xu, Jiangchun
APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 505, Application US/10010940 Publication No. US20030088062A1
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US-10-012-896-505
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Best Local Similarity
Matches 20; Conserv
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APPLICANT: Foy, Teresa
APPLICANT: Fanger, Gary R.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSITIONS OF PROSTATE CANCER
FILE REFERENCE: 210121.427026
CURRENT APPLICATION NUMBER: US/09/895,814
CURRENT FILING DATE: 2001-06-29
NUMBER OF SEQ ID NOS: 990
SOFTWARE: PASLSEQ for Windows Version 3.0
SEQ ID NO 505
LENGTH: 20
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100.0%; Score 116; DB 9;
Best Local Similarity 100.0%; Pred. No. 1.3e-10;
Matches 20; Conservative 0; Mismatches 0;
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Houghton, Raymond L.
Vinals de Bassols, Carlota
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McNeill, Patricia D.
Houghton, Raymond L.
Vinals de Bassols, Carlota
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US-09-895-814-505
Dillon, Davin C.
Mitcham, Jennifer L.
Harlocker, Susan L.
Jiang, Yuqiu
Kalos, Michael D.
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Skeiky, Yasir A.W.
Hepler, William T.
Henderson, Robert A.
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Skeiky, Yasir A.W.
Hepler, William T.
Henderson, Robert A.
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APPLICANT: Dillon, Davin C.
APPLICANT: Mitcham, Jennifer L.
APPLICANT: Harlocker, Susan L.
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Wantanabe, Yoshihiro
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Kalos, Michael D.
Retter, Marc W.
Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
                                                                                                                                                    Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
Li, Samuel X.
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                                                                                                           Retter, Marc W.
Stolk, John A.
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Harlocker, Susan L.

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CURRENT FILING DATE: 1997-03-04-55

PRIOR FILING DATE: 1997-03-04-56

PRIOR FILING DATE: 1997-03-07

PRIOR PEDILCATION NUMBER: 60/040, 162

PRIOR PEDILCATION NUMBER: 60/040, 163

PRIOR PEDING DATE: 1997-03-07

PRIOR PEDILCATION NUMBER: 60/040, 163

PRIOR PEDING DATE: 1997-03-07

PRIOR PEDING DATE: 1997-05-23

PRIOR PEDING
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APPLICATION NUMBER: 60/047,582
FILING DATE: 1997-05-23
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APPLICANT: Stolk, John A.
APPLICANT: Stolk, John A.
APPLICANT: Kalos, Michael D.
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REPERBENCE: 210121.427C29
CURRENT APPLICATION NUMBER: US/10/294,025
CURRENT FILING DATE: 2002-11-12
NUMBER OF SEQ ID NOS: 1038
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 505
LENGTH: 20
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TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND
TITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
FILE REFERENCE: 210.11.427C98
CURRENT APPLICATION NUMBER: US/10/144,678A
CURRENT FILING DATE: 2002-08-12
NUMBER OF SEQ ID NOS: 1033
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 505
LENGTH: 20
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Best Local Similarity 100.0%; Score 116; DB 14; Length 20;
Best Local Similarity 100.0%; Pred. No. 1.3e-10;
Matches 20; Conservative 0; Mismatches 0; Indels (
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Foy, Teresa M.
Watanabe, Yoshihiro
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US-10-294-025-505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Made in a lab
US-10-144-678A-505
                                                                   Henderson, Robert A.
Kalos, Michael D.
                                                                                                                                                                                                                                                                                                                                                                                                                               McNeill, Patricia D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Houghton, Raymond L
                                                                                                                                                                                                                                                                                                                                 Wang, Aijun
Skeiky, Yasir A. W.
Hepler, William T.
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                    Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
                                                                                                                                 Fanger, Gary R.
Retter, Marc W.
Stolk, John A.
                                                                                                                                                                                                                                                                                                         Samuel X.
                                                  Jiang, Yuqiu
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APPLICATION NUMBER: 60/047,632 PRIOR

1 KENSAFPFFCCNDNVTNTAN 20

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R FILING DATE: 1997-04-11

R APPLICATION NUMBER: 60/043,674

R FILING DATE: 1997-04-11

R APPLICATION NUMBER: 60/043,669

R FILING DATE: 1997-04-11

R APPLICATION NUMBER: 60/043,312

R RELING DATE: 1997-04-11

R APPLICATION NUMBER: 60/043,313

R RILING DATE: 1997-04-11

R APPLICATION NUMBER: 60/043,672
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R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,637
R APPLICATION NUMBER: 60/056,903
R APPLICATION NUMBER: 60/056,903
R APPLICATION NUMBER: 60/056,888
R APPLICATION NUMBER: 60/056,888
R APPLICATION NUMBER: 60/056,888
R APPLICATION NUMBER: 60/056,879
R APPLICATION NUMBER: 60/056,879
R APPLICATION NUMBER: 60/056,879
                                                                                                          R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,568
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R APPLICATION NUMBER: 60/043,314
R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,569
R FILING DATE: 1997-04-11
R FILING DATE: 1997-04-11
R FILING DATE: 1997-04-11
R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,311
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R APPLICATION NUMBER: 60/043,315
R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/048,974
R FILING DATE: 1997-06-06
R FILING DATE: 1997-08-22
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R APPLICATION NUMBER: 60/056,894
R PILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,911
R FILING DATE: 1997-08-22
R R FILING DATE: 1997-08-22
R FILING DATE: 1997-08-22
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,636
FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,601
FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/043,580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/056,877
FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,889
APPLICATION NUMBER: 60/056,893
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APPLICATION NUMBER: 60/056,878
FILING DATE: 1997-08-22
APPLICATION NUMBER: 60/056,662
FILING DATE: 1997-08-22
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FILING DATE: 1997-08-22
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FILING DATE: 1997-08-22
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FILING DATE: 1997-08-22
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FILING DATE: 1997-08-22
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APPLICATION NUMBER: 60/
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                                                              PRIOR 
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PRIOR APPLICATION NUMBER: 60/048,964
PRIOR FILING DATE: 1997-06-06
PRIOR PILING DATE: 1997-06-06
PRIOR PILING DATE: 1997-06-05
PRIOR PILING DATE: 1997-08-22
NUMBER OF SEQ ID NOS: 280
SOFTWARE: PATCHIN VEr. 2.0
SEQ ID NO 137
R PILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/057,761

R PILING DATE: 05-Sep-1997

R APPLICATION NUMBER: 60/047,599

R FILING DATE: 1997-05-23

R APPLICATION NUMBER: 60/047,588

R APPLICATION NUMBER: 60/047,588

R APPLICATION NUMBER: 60/047,588

R APPLICATION NUMBER: 60/047,588
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R APPLICATION NUMBER: 60/056,664

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,876

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,881
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RR PAPLICATION NUMBER: 60/056,909
RR FILING DATE: 1997-08-22
RR APPLICATION NUMBER: 60/056,875
RR PILING DATE: 1997-08-22
RR APPLICATION NUMBER: 60/056,862
RR PEILING DATE: 1997-08-22
                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/047,614
FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/043,578
FILING DATE: 1997-04-11
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FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/043,670
APPLICATION NUMBER: 60/043,670
APPLICATION NUMBER: 60/056,632
                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/047,590
FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,594
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APPLICATION NUMBER: 60/043,576
FILING DATE: 1997-04-11
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APPLICATION NUMBER: 60/056,908
FILING DATE: 1997-08-22
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APPLICATION NUMBER: 60/047,586
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APPLICATION NUMBER: 60/047,589
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APPLICATION NUMBER: 60/047,593
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Best Local Similarity 100.0
Matches 20; Conservative
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US-09-148-545-137 ; Sequence 137, Application US/09148545

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PURENT: NECREDIC PRODUPT
TILE PREBENEE: PRODUPT
TILE OF INVENTION: O' Human Secreted Proteins
TILE PRODUCT:
PRAFLIER PLING DATE: 1999-0-9-04
ERALIER PLING DATE: 1999-0-9-04
ERALIER PLING DATE: 1999-0-9-04
ERALIER PLING DATE: 1999-0-3-05
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R APPLICATION NUMBER: 60/056,888

R APPLICATION NUMBER: 60/056,888

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,879

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,894

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,911

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,911

R APPLICATION NUMBER: 60/056,911

R APPLICATION NUMBER: 60/056,911

R FILING DATE: 1997-08-22

R APPLICATION NUMBER: 60/056,874

RR FILING DATE: 1997-08-22

RR PILING DATE: 1997-08-22 R FILING DATE: 1997-06-06
R APPLICATION NUMBER: 60/056,886
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,877
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,889 R PILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,893
R FILING DATE: 1997-08-22
R PPLICATION NUMBER: 60/056,630
R FILING DATE: 1997-08-22
R APPLICATION NUMBER: 60/056,878 R FILING DATE: 1997-08-22 R APPLICATION NUMBER: 60/056,882 R FILING DATE: 1997-08-22 A PPLICATION NUMBER: 60/056,637 R FILING DATE: 1997-08-22 R APPLICATION NUMBER: 60/056,903 R PILING DATE: 1997-04-11
R PILING DATE: 1997-04-11
R PILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,672
R PILING DATE: 1997-04-11
R PRILING DATE: 1997-04-11
R PILING DATE: 1997-04-11
R PILING DATE: 1997-04-11 R FILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,674
R FILING DATE: 1997-04-11
R PILING DATE: 1997-04-11
R PILING DATE: 1997-04-11
R APPLICATION NUMBER: 60/043,4312 FILING DATE: 1997-08-22 APPLICATION NUMBER: 60/056,892 FILING DATE: 1997-08-22 APPLICATION NUMBER: 60/057,761 FILING DATE: 05-Sep-1997 APPLICATION NUMBER: 60/047,599 APPLICATION NUMBER: 60/047,595 FILING DATE: 1997-05-23 APPLICATION NUMBER: 60/056,662 FILING DATE: 1997-08-22 APPLICATION NUMBER: 60/056,872 PPLICATION NUMBER: 60/043,569 TLING DATE: 1997-04-11 APPLICATION NUMBER: 60/043,311 FILING DATE: 1997-04-11 APPLICATION NUMBER: 60/043,671 FILING DATE: 1997-08-22 ILING DATE: 1997-08-22 EARLIER I EARLIER EARLIER

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                                                                                                                                                                                                                                                                                                                                                                               °,
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                                                                                                                                                                                                                                                                                                                           Length 240;
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Pred. No. 1.6e-09;
                                                                                                                                                                                                                                                                                                                                                                            Mismatches
PRIOR APPLICATION NUMBER: PCT/US01/16450
PRIOR FILING DATE: 2001-05-18
PRIOR APPLICATION NUMBER: US 60/205,515
PRIOR PLIING DATE: 2000-05-19
NUMBER OF SEQ ID NOS: 2876
SSCYWARE: Patentin Ver. 3.1
ESEQ ID NO 1489
LENGTH: 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 934
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ ID NO 114
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CURRENT APPLICATION NUMBER: US/09/759,143
NUMBER: CONTRIBUTED OF THE TRANSPORT OF T
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Patent No. US20020022248A1
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US-09-780-669-114
Sequence 114, Application US/09780669
Patent No. US20020051977A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    164 KENSAFPPFCCNDNVTNTAN 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        165 KENSAFPFCCNDNVTNTAN 184
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Dillon, Davin C.
Mitcham, Jennifer L.
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Dillon, Davin C.
Mitcham, Jennifer L.
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Kalos, Michael D.
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Best Local Similarity 100.0%;
Matches 20; Conservative 0
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Retter, Marc W.
Stolk, John A.
Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
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Hepler, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jiang, Yuqui
                                                                                                                                                                                                                     ; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-264-237-1489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wang, Aijun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; ORGANISM: Homo sapien
US-09-759-143-114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Li, Samuel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
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Publication No. US20040009491A1
GENERAL INFORMATION:
APPLICANT: Birse et al.
TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies FILE REFERENCE: PAINT APPLICATION NURBER: US/10/264,237
CURRENT APPLICATION DATE: 2002-10-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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                                                                                             EARLIER FILING DATE: 1997-05-23
EARLIER FILING DATE: 1997-05-23
EARLIER PILING DATE: 1997-05-23
EARLIER FILING DATE: 1997-06-23
EARLIER FILING DATE: 1997-06-22
FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,588
                                                    FILING DATE: 1997-05-23
APPLICATION NUMBER: 60/047,585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KENSAPPPFCCNDNVTNTAN 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 KENSAPPPCCNDNVTNTAN 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Ver. 2.0 SEQ ID NO 137 LENGTH: 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-264-237-1489
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Length 241;

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Query Match
Best Local Similarity 100.0%; Pred. No. 1.6e-09;
Matches 20; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Search completed: February 5, 2005, 20:11:31 Job time: 75.9153 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        165 KENSAFPPFCCNDNVTNTAN 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 KENSAFPFFCCNDNVTNTAN 20
LENGTH: 241 amino acide
TYPE: amino acid
STRANDENNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: HOMO SAPIENS
                                                                                                                                                                                                                                                     US-09-030-606-114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      à
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US-09-030-606-114

Sequence 114, Application US/09030606

Patent No. USZ0020081580A1

GENERAL INFORMATION:
APPLICANT:
APPLICANT:
AND SEQUENCES:
COMPOUNDS FOR IMMUNODIAGNOSIS OF PROSTATE CANCER AND METHODS FOR IMMUNES OF INCOMPANION:
COMPOUNDS:
C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Houghton, Raymond L.

TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE THERAPY AND FILLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER CURRENT ESFERRICE: 210121.427024

CURRENT APPLICATION NUMBER: US/09/780,669

CURRENT FILING DATE: 2001-02-09

NUMBER OF SEQ ID NOS: 943

SOFTWARE: PASKSEQ FOR WINDOWS Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
100.0%; Score 116; DB 9; Length 241;
Best Local Similarity 100.0%; Pred. No. 1.6e-09;
Matches 20; Conservative 0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 KENSAFPPFCCNDNVTNTAN 20
                                                                                                                                                                                                                                                                                                                                                                                                     Wang, Aijun
Skeiky, Yasir A.W.
Hepler, William
Hural, John
McNeill, Patricia D.
                                                         Jiang, Yuqui
Henderson, Robert A.
Kalos, Michael D.
                            Harlocker, Susan L.
                                                                                                                                                                                                                                                                   Day, Craig H.
Vedvick, Thomas S.
Carter, Darrick
                                                                                                                                                              Fanger, Gary R.
Retter, Marc W.
Stolk, John A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT; ORGANISM: Homo sapien
US-09-780-669-114
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LENGTH: 241
                                                                                                                                                                                                  APPLICANT:
APPLICANT:
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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
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5, 2005, 19:49:45; Search time 19.661 Seconds (without alignments) 97.876 Million cell updates/sec February Run on:

US-09-780-669-114\_COPY\_165\_184 116 1 KENSAFPPFCCNDNVTNTAN 20 Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

283416 seqs, 96216763 residues Searched:

283416 Total number of hits satisfying chosen parameters:

seq length: 0 seq length: 200000000 Minimum DB 8 Maximum DB 8

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR\_79:\*
1: pir1:\*
2: pir2:\*
3: pir3:\*
4: pir4:\* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	tetraspan TSPAN-1	hydrophobin Ccg-2	env polyprotein pr	probable methionyl	carboxylesterase (	xeroderma pigmento	modulator of drug	hypothetical prote	env polyprotein pr				env polyprotein pr		in	hypothetical prote		cyclin-dependent k	NADH2 dehydrogenas	B. subtilis YunD p	hypothetical prote	first mannosyl tra	probable phosphoch	probable phosphoch		conserved hypothet	hypothetical prote		coat protein - pot
SUMMARIES	QI 1	A59262	A46222				S42402		T04179	VCLJ22	VCLJE1	VCLJE2	VCLJE3	VCLJEV	VCLJEW	VCLJWS	T15101	T49328	T09968	C27311	AI1744						AB0417	A71915	N	\$12975
	Length DB	241 2	108 2	860 1	301 2	•	•	•	633 2	859 1	859 1	859 1	859 1	859 1	859 1	859 1	128 2	145 2	196 2	460 2	463 2			279 2			68 2	194 2	241 2	304 2
do	Query Match I	100.0	44.0	44.0	43.1	43.1	41.4	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	39.7	38.8	38.8	38.8	38.8	38.8	38.4	38.4	37.9	37.9	37.9	37.1	37.1	37.1	37.1
	Score	116	51	51	20	20	48	46	46	46	46	46	46	46	46	46	45	45	45	45	45	44.5	44.5	44	44	44	43	43	43	43
	Result No.			Э	4	ហ	ø	7	80	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

Mutator-like trans	Similar to mudrA p	hypothetical prote	probable dehydroge	probable dehydroge	formate C-acetyltr	protein F9C16.9 (i	protein F3F9.12 [i	dof protein - frui	thyroxine delodina	MdaB protein homol	transcription regu	hypothetical profe	hypothetical prote	translation releas	hypothetical prote
F84512	B86309	A65135	H91158	F86004	JC6010	D96503	D96812	T13712	T10530	G81301	B97195	F90006	T29836	C69402	T27770
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597	622	711	711	711	740	946	993	1012	264	192	286	286	369	407	460
37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1	36.6	36.2	36.2	36.2	36.2	36.2	36.2
43	43	43	43	43	43	43	43	43	42.5	42	42	42	42	42	42
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

### ALIGNMENTS

tetraspan TSPAN-1 - human C;Species: Homo sapiens (man) C;Date: 19-May-2000 #sequence\_revision 19-May-2000 #text\_change 09-Jul-2004

C;Accession: A59262
R;Todd, S.C.; Doctor, V.S.; Levy, S.
Biochim. Biophys. Acta 1399, 101-104, 1998
A;Title: Sequences and expression of six new members of the tetraspanin/TM4SF family. A;Accession: A59262

A;Status: preliminary; not compared with conceptual translation A;Molecule type: mRNA

A;Residues: 1-241 <TOD> A;Cross\_references: UNIPROT:060635; GB:AF054838; NID:92997740; PIDN:AAC69714.1; PID:9299

A,Gene: TSPAN-1 C,Superfamily: CD9 antigen

Gaps ö Query Match 100.0%; Score 116; DB 2; Length 241; Best Local Similarity 100.0%; Pred. No. 5.6e-10; Matches 20; Conservative 0; Mismatches 0; Indels

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1 KENSAFPPFCCNDNVTNTAN 20

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hydrophobin Ccg-2 - Neurospora crassa NyAlternate names: blue-light-inducible protein bli-7 C,Species: Neurospora crassa C,Date: 21-Sep-1993 #sequence\_revision 18-Nov-1994 #text\_change 09-Jul-2004

C;Accession: A46222; A5645
R;Bell-Pedersen, D.; Dunlap, J.C.; Loros, J.J.
Genes Dev. 6, 2382-2394, 1992
A;Title: The Neurospora circadian clock-controlled gene, ccg-2, is allelic to eas and envise ession: A46222; MUID:93093472; PMID:1459460

A;Status: preliminary
A;Molecule type: nucleic acid
A;Cross-references: UNIPROT:004571; GB:X67339; GB:S50953; NID:g2983; PIDN:CAA47754.1; PI:A;Note: sequence extracted from NCBI backbone (NCBIN:120209, NCBIP:120210)
A;Note: sequence extracted from NCBI backbone (NCBIN:120209, NCBIP:120210)
BNA Seq. 3, 131-141, 1992
A;Title: Neurospora crassa blue-light-inducible gene bli-7 encodes a short hydrophobic p
A;Reference number: A56645; MUID:93112994; PMID:1472707

A, Accession: A56645 A, Molecule type: DNA A, Residues: 1-108 <EBE>

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Gaps

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Length 301;

DB 2;

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3; Mismatches
                           Score 50;
Pred. No.
                                                                                                                                                            2 ENSAFPFCCNDNVTNTA 19
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                                 43.1%;
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                                                      Similarity 50.0
9; Conservative
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A,Molecule type: mRNA
A,Residues: 1-1293 <HEN>
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nes 7; Conserv
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                              Query Match
Best Local S:
Matches 9
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C; Species: Sulfolobus solfataricus
C; Date: 09-Oct-1997 #sequence_revision 24-Oct-1997 #text_change 09-Jul-2004
C; Ascession: 275391
R; Sensen, C.W.; Klenk, H.P.; Singh, R.K.; Allard, G.; Chan, C.C.Y.; Liu, Q.Y.; Penny, S.
Mol. Microbiol. 22, 175-191, 1996
A; Reference number: 373076; MUID:97055432; PMID:8899719
A; Reference number: 373076; MUID:97055432; PMID:8899719
A; Reseronce number: 373076; MUID:97055432; PMID:8899719
A; Scatus: nucleic acid sequence not shown; translation not shown
A; Residues: 1-301 ASBN>
A; Cross-references: UNIPROT:P95963; EMBL:Y08257; NID:G1707772; PIDN:CAA69553.1; PID:g170
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, September 1996
C; Keywords: aminopeptidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Superfamily: equine infectious anemia virus env polyprotein
C;Keywords: coat protein; glycoprotein; polyprotein; transmembrane protein
C;Keywords: coat protein; glycoprotein; polyprotein; transmembrane protein
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-445/Product: coat protein gp90 #status predicted <CP1>
F;445-80/Product: coat protein gp45 #status predicted <CP2>
F;446-80/Product: coat protein gp45 #status predicted <TW3>
F;447-463/Domain: transmembrane #status predicted <TW3>
F;615-637/Domain: transmembrane #status predicted <TW3>
F;818-836/Domain: transmembrane #status predicted <TW3>
F;817-836/Domain: transmembrane #status predicted <TW3>
F;817-836/Domain: transmembrane #status predicted <TW3>
F;817-814,148,186,201,214,235,244,308,337,340,346,369,400,407,412,423,484,491,551,558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               env polyprotein precursor (clone P3.2-5) - equine infectious anemia virus
N;Contains: coat protein gp45; coat protein gp90
C;Species: equine infectious anemia virus
A;Note: host Equus caballus (domestic horse)
C;Accession: D34027 #sequence_revision 31-Mar-1991 #text_change 09-Jul-2004
N;Payne, S.L.; Faraf, F.D.; Liu, C.P.; Dhruva, B.R.; Rwambo, P.; Issel, C.J.; Montelaro, Virology 161, 321-331, 1987
A;Title: Antigenic variation and lentivirus persistence: variations in envelope gene sequence number: A34027; MUID:88072070; PMID:2825406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Cross-references: UNIPROT: P22430; GB: M18388; NID: 9323841; PIDN: AAA66410.1; PID: 9323842
A;Cross-references: GB:X62170; GB:S51408; NID:g296383; PIDN:CAA44101.1; PID:g296384
A;Note: sequence extracted from NCBI backbone (NCBIN:121427, NCBIP:121428)
C;Genetics:
A;Gene: bli-7; ccg-2
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Pred. No. 8.7;
5; Mismatches 5; Indels
                                                                                                                                                                      Length 108
                                                                                                                                                                                                                                      Indels
                                                                                                                                                                  Score 51; DB 2;
Pred. No. 1.4;
                                                                                                                                                                                                                                          1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 KENSAFPPFCCNDNVTNT 18
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8; Conservative
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A; Residues: 1-860 < PAY>
                                                                                                                                                                                                                                                                                                       10 CCNDNVTNTAN 20
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xeroderma pigmentosum group C complementing factor - fruit fly (Drosophila melanogaster) C;Species: Drosophila melanogaster C;Species: Drosophila melanogaster C;Date: 13-Jan-1995 #text_change 09-Jul-2004 C;Accession: 842402; 839259 R;Henning, K.A.; Peterson, C.; Legerski, R.; Friedberg, E.C. Nucleic Acids Res. 22, 257-261, 1994 A;Title: Cloning the Drosophila homolog of the xeroderma pigmentosum complementation group RADA gene.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A, Cross.references: UNIPROT: Q24595; EMBL: Z28622; NID: 9434007; PIDN: CAA82262.1; PID: 943400
        NiAlteriate names: proline-beta-naphthylandase
NiAlteriate names: proline-beta-naphthylandase
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 04-Dec-1992 #sequence_revision 04-Dec-1992 #text_change 09-Jul-2004
C;Date: 04-Dec-1992 #sequence_revision 04-Dec-1992 #text_change 09-Jul-2004
C;Accession: S19307; S23607
R;Matusushima, M: Inoue, H: Ichinose, M: Tsukada, S.; Miki, K.; Kurokawa, K.; Takahashi
R;EBS Lett. 293, 37-41, 1991
A;Title: The nucleotide and deduced amino acid sequences of porcine liver proline-beta-ne
A;Reference number: S19307; MUID:92070571; PMID:1959668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: protein
A; Molecule type: protein
A; Residues: 19-40 <MATCA
A; Note: 28-Lys and 31-Leu were also found
C; Superfamily: cholinesterase; cholinesterase homology
C; Superfamily: cholinesterase; cholinesterase endoplasmic reticulum; glycoprotein; homotrimer
C; Keywords: carboxylic ester hydrolase; endoplasmic reticulum; glycoprotein; homotrimer
F; 1-18-10 homotrimes ester hydrolase #status experimental <MAT>
F; 19-566 Product: carboxylesterase #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: mENA
A;Residues: 1-566 <MAT1>
A;Cross-references: UNIPROT:Q29550; EMBL:X63323; NID:g1930; PIDN:CAA44929.1; PID:g1931
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carboxylesterase (EC 3.1.1.1) precursor
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A;Residues: 1-859 <PER>
A;Cross-references: UNIPROT:P32541; GB:M87581; NID:g290627; PIDN:AAA43005.1; PID:g290630
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C;Keywords: coat protein; glycoprotein; polyprotein; transmembrane protein
C;Keywords: coat protein; glycoprotein; predicted <SIG>
F;12-22/Domain: signal sequence #status predicted <SIG>
F;23-444/Product: coat protein gp40 #status predicted <GPP>
F;445-859/Product: coat protein gp45 #status predicted <GGP>
F;446-859/Product: coat protein gp45 #status predicted <GGP>
F;446-472/Region: hydrophobic
F;615-636/Domain: transmembrane #status predicted <TMN>
F;40,112,141,148,186,214,233,244,340,368,399,406,411,483,490,550,557/Binding site: carbo
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R;Payne, S.L.; Fang, F.D.; Liu, C.P.; Dhruva, B.R.; Rwambo, P.; Issel, C.J.; Montelaro, Virology 161, 321-331, 1987
A;Title: Antigenic variation and lentivirus persistence: variations in envelope gene seq A;Reference number: A34027; WUID:88072070; PMID:2825406
A;Accession: A34027
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F;40,112,141,148,186,214,233,244,340,368,399,406,411,422,483,490,550,557,752/Binding sit
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R; Payne, S.L.; Fang, F.D.; Liu, C.P.; Dhruva, B.R.; Rwambo, P.; Issel, C.J.; Montelaro,
Virology 161, 321-331, 1987
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Date: 31-Mar-1991 #sequence_revision 31-Mar-1991 #text_change 09-Jul-2004
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N;Contains: coat protein gp45; coat protein gp90
C;Species: equine infectious anemia virus
A;Note: host Equus caballus (domestic horse)
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Pred. No.
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28 EENTMFQPYCYNNDSKNS 45
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Best Local Similarity 38.5.
Best 7; Conservative
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A; Residues: 1-859 <PAY>
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Matches 7; Conserv
A;Molecule type: DNA
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A.Authors: Wallin, E.; Hayes, W.S.; Borodovsky, M.; Karpk, P.D.; Smith, H.O.; Fraser, C. A.Authors: Wallin, E.; Hayes, W.S.; Borodovsky, M.; Karpk, P.D.; Smith, H.O.; Fraser, C. A.Reference number: A64520; MUID:97394467; PMID:9252185
A.Reference number: A64520; MUID:97394467; PMID:9252185
A.Status: preliminary; nucleic acid sequence not shown; translation not shown
A.Residues: 1-194 < TOWN
A.Residues: 1-194 < TOWN
A.Cross-references: UNIPROT:025347; GB:AE000511; NID:g2313747; PIDN:AAD0769
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env polyprotein precursor - equine infectious anemia virus (strain CL22)

N.Alternate names: coat polyprotein

N.Alternate names: coat protein gp45; coat protein gp90

C.Species: equine infectious anemia virus

A.Note: host Equus caballus (domestic horse)

C.Accession: C41991

C.Accession: C41991

C.Accession: C41991

W. Pirry, S. T.; Flaherty, M. T.; Kelley, M. J.; Clabough, D. L.; Tronick, S. R.; Coggins, L.;

J. Virol. 66, 4085-4097, 1992

A.Title: The surface envelope protein gene region of equine infectious anemia virus is rance number: A1991; MUID:92292230; PMID:1318398
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                                                                                                      modulator of drug activity - Helicobacter pylori (strain 26695)
C;Species: Helicobacter pylori
C;Date: 09-Aug-1997 #sequence_revision 09-Aug-1997 #text_change 09-Jul-2004
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64.3%;
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Best Local Similarity 64.3
Matches 9; Conservative
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Best Local Similarity
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R; Tomb, J.F.; White,
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Cyaccession: C27842
R;Kawakami, T.; Sherman, L.; Dahlberg, J.; Gazit, A.; Yaniv, A.; Tronick, S.R.; Aaronson, Virology 158, 300-312, 1987
A;Title: Nucleotide sequence analysis of equine infectious anemia virus proviral DNA.
A;Reference number: A27842; MUID:87236196; PMID:3035786
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A;Note: host Equus caballus (domestic horse)
C;Date: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 09-Jul-2004
C;Accession: A25610; B25610
R;Rushlow, K; Olean, K; Stiegler, G; Payne, S.L.; Montelaro, R.C.; Issel, C.J.
N;Rushlow, K; Olean, K; Stiegler, G; Payne, S.L.; Montelaro, R.C.; Issel, C.J.
A;Title: Lentivirus genomic organization: the complete nucleotide sequence of the env ger
A;Title: Lentivirus genomic organization: the complete nucleotide sequence of the env ger
A;Title: Lentivirus Genomic A25610
A;Molecule type: DNA
A;Molecule type: DNA
A;Molecule type: DNA
A;Cossion: C;Genetics:
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C;Superfamily: equine infectious anemia virus env polyprotein
C;Superfamily: equine infectious anemia virus env polyprotein;
C;Superfamily: coat protein; glycoprotein; polyprotein; transmembrane protein
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-444/Product: coat protein gp90 #status predicted <GGP>
F;445-859/Product: coat protein gp45 #status predicted <GGP>
F;446-472/Domain: transmembrane #status predicted <TWN>
F;617-636/Domain: transmembrane #status predicted <TWN>
F;40,112,141,148,186,214,233,244,340,368,399,406,411,483,490,550,557,752/Binding site: ca
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C;Species: equine infectious anemia virus
A;Note: host Equus caballus (domestic horse)
C;Date: 31-Mar-1989 #sequence_revision 31-Mar-1989 #text_change 09-Jul-2004
C;Accession: C27842
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C;Keywords: coat protein; glycoprotein; polyprotein; transmembrane protein
F;1-22/Domain: signal sequence #status predicted <SIG>
F;23-444/Product: coat protein gp96 #status predicted <GP1>
F;445-85/Product: coat protein gp96 #status predicted <GP2>
F;446-472/Domain: transmembrane #status predicted <TN1>
F;46-472/Domain: transmembrane #status predicted <TN1>
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Pred. No. 48;
6; Mismatches 5; Indels
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Pred. No. 48;
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A;Molecule type: DNA
A;Residues: 1-859 <KAW>
A;Cross-references: UNIPROT:P11306; GB:M16575; NID:g323836
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Best Local Similarity 38.9%;
Matches 7; Conservative
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Notatines: coat protein gp45; coat protein gp30

NiContains: coat protein gp45; coat protein gp30

C.Species: equine infectious anemia virus

NiContains: coat protein gp45; coat protein gp30

C.Species: equine infectious anemia virus

A.Note: host Equus caballus (domestic horse)

C.Date: 31-Mar-1991 #sequence_revision 31-Mar-1991 #text_change 09-Jul-2004

C.Date: 31-Mar-1991 #sequence_revision 31-Mar-1991 #text_change 09-Jul-2004

C.Date: 31-Mar-1991 #sequence_revision 31-Mar-1991 #text_change 09-Jul-2004

R.Payne, S.L.; Fang, F.D.; Liu, C.P.; Dhruva, B.R.; Rwambo, P.; Issel, C.J.; Montelaro, Virology 161, 22131, 1987

A.Protogy 161, 221-331, 1987

A.Protein: Caparition and lentivirus persistence: variations in envelope gene seq A.Residues: 1-859 epay.

A.Nocession: C34027

A.Nocession: C3402

C.Genetics:
C.Genetics:
C.Genetics:
C.Superfamily: equine infectious anemia virus env polyprotein
C.Keywords: coat protein; glycoprotein; polyprotein; transmembrane #status preddicted c7M2>

F.33-444/Product: coat protein gp30 #status preddicted c7M2>

F.33-44/Product: coat protein gp30 #status preddicted c7M3>

F.34-65/Domain: transmembrane #status preddicted c7M3>

F.34-66/Domain: transmembrane #status preddicted c7M3>

F.34-67/Domain: transmembrane #status preddicted c7M3>

F.34-67/Domain: transmembrane #status preddicted c7M3>

F.34-67/Domain: transmembrane #status preddicted c7
                                A;Title: Antigenic variation and lentivirus persistence: variations in envelope gene seq A;Reference number: A34027; MUID:88072070; PMID:2825406.
A;Accession: B34027
A;Molecule type: genomic RNA
A;Residues: 1-859 <-PAY>
A;Cross-references: UNIPROT:P22428; GB:M18386; NID:g323832; PIDN:AA66408.1; PID:g323833
C;Genetios:
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C;Superfamily: equine infectious anemia virus env polyprotein
C;Reywords: coat protein; glycoprotein; polyprotein; transmembrane protein gp90 #status predicted <GRI>F;23-444/Product: coat protein gp90 #status predicted <TN>
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F;446-462/Domain: transmembrane #status predicted <TM3>
F;81-807/Domain: transmembrane #status predicted <TM3>
F;81-807/Domain: transmembrane #status predicted <TM4>
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C;Species: equine infectious anemia virus
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C; Date: 31-Mar-1991 #sequence_revision 31-Mar-1991 #text_change 09-Jul-2004
R; McGasion: 807589
R; McGaliare, T.C.; Lacy, P.A.; O'Rourke, K.I.
Nucleic Acids Res. 18, 196, 1990
A; Title: cDNA sequence of the env gene of a pathogenic equine infectious anemia lentivir
A; Recession: 807589; MUD:90174929; PMID:2155398
A; Status: translation not shown
A; Molecule type: genomic RNA
A; Residues: 1-859 cMCG>
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C; Superfamily: equine infectious anemia virus env polyprotein
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F; 81-807/Domain: transmembrane #status predicted <TM4>
F; 81-817-818-817-811.148,186,214,233,244,313,340,368,399,406,411,483,490,550,557,752/Binding sit
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A Straubberg R.L.; Feingold B.A.; Grouse L.H.; Derge J.G.;

ALSTAUBLERG R.L.; Feingold B.A.; Grouse L.H.; Derge J.G.;

Altschul S.F.; Zeeberg B., Buerow K.H.; Schaefer C.F.; Bhat N.K.;

Altschul S.F.; Jordan H.; Moore T.; Max S.I.; Wang J.; Haich F.;

Hopkins R.F.; Jordan H.; Moore T.; Max S.I.; Wang J.; Haich F.;

A stapleton M.; Soares M.B.; Bonaldo M.F.; Casavant T.L.; Scheetz T.E.;

Brownstein M.J.; Usdin T.B.; Toshiyuki S.; Carninci P.; Prange C.;

A Raha S.S.; Loquellano N.A.; Peters G.J.; Abrameon R.D.; Mullahy S.J.;

Bosak S.A.; McEvan P.J.; McKernan K.J.; Malek J.A.; Gunarathe P.H.;

Richards S.; Worley K.C.; Hale S.; Garcia A.M.; Gay L.J.; Hulyk S.W.;

A Nilalon D.K.; Muzny D.M.; Sodergren E.J.; Lu X.; Gibbs R.A.;

Radan A.; Young A.C.; Shevchenko Y.; Bouffard G.G.;

Blakesley R.W.; Touchman J.W.; Green E.D.; Dickson M.C.;

Butterfield Y.S.N.; Krzywinski M.I.; Skalska N.;

Butterfield Y.S.N.; Krzywinski M.I.; Skalska N.;

Butterfield Y.S.N.; Krzywinski M.I.; Skalska N.;

Bromerch A.; Schein J.E.; Jones S.J.M., Marra M.A.;

T "Generation and initial analysis of more than 15,000 full-length human
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SEQUENCE FROM N.A.
SEQUENCE FROM N.A.
Puls K.L., Ni J., Liu D., Morahan G., Wright M.D.;
"The molecular characterization of four tetraspanins.";
Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and mouse cDNA sequences.";
Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
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GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                    1612378 segs, 512079187 residues
                                                                                                                                                                       US-09-780-669-114_COPY_165_184
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QEAYR9
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Maximum Match 100%
Listing first 45 summaries
                                                                    - protein search, using sw model
                                                                                                                                                                                        116
1 KENSAFPPFCCNDNVTNTAN 20
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Q8MLA2
Q7PDV5
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Q8EH13
Q66747
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1: uniprot_sprot:*
2: uniprot_trembl:*
                                                                                                                                                                                                                                                                                                                                                                      seq length: 0
seq length: 200000000
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Match 1
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Maximum DB
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prunus pers
prunus dulc
oryza sativ
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                                                                                                                          Lmmun
                                 pers
                                                                                         human immun
                                                                             helicobacte
                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDAMed=9714763; DOI=10.1016/S0167-4781(98)00087-6; MEDLINE=98390278; PubMed=9714763; DOI=10.1016/S0167-4781(98)00087-6; Todd S.C., Doctor V.S., Levy S.; "Sequences and expression of six new members of the tetraspanin/TM4SF
                                  prunus
             prunne
                                                                                                                                   human 1
                        prunus
                                                                                                                           human
                                                                                                    human
                                                                                                              human
                                                                                                                                                                                                                                                                                                                          Eukaryota, Metazoa; Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                             060635; 060745;
16-0CT-2001 (Rel. 40, Created)
16-0CT-2001 (Rel. 40, Last sequence update)
05-UUL-2004 (Rel. 44, Last annotation update)
Tetraspanin 1 (Tspan-1) (Tetraspan NET-1) (Tetraspanin TM4-C).
Q85499
Q8h2b2
P81651
P81402
Q91641
Q62987
Q62987
P88310
P88311
P88311
P88312
                                                                                                                                             P88313
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rubinstein E., Serru V., Boucheix C.; "New tetraspans identified in the EST database."; Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                       241 AA
                                                                                                                                                                               ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                              Biochim. Biophys. Acta 1399:101-104(1998)
         Q8H2B2
NLT1 PRUAR
NLT1 PRUPE
Q9LED1
NLT1 PRUDU
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P88310
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                       NCBI_TaxID=9606;
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3 NSAFPPFCCNDN 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE=Kidney;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
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Q86FC1;
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Matches
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δ
                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its word in a profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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PubMed=12477932; DOI=10.1073/pnas.242603899;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Strausner R.D., Colline F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetcw K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.P., Jordan H., Moore T., Wax S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K.; Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Extracellular (Potential).

Potential.

Cytoplasmic (Potential).

N-linked (GlCNAc. .) (Potential).

N-linked (GlCNAc. .) (Potential).

N-linked (GlCNAc. .) (Potential).

N-linked (GlCNAc. .) (Potential).
SUBCELLULAR LOCATION: Integral membrane protein (Probable).
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                              -!- SIMILARITY: Belongs to the tetraspanin (TM4SF) family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AF938AD7147CB884 CRC64;
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Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GO; GO: 60:6021; C:integral to membrane; TAS.
InterPro; IPR008952; Tetraspanin.
InterPro; IPR000301; Transmem_4.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS, PRO0259; TMFOUR.
PROSITE, PS00421; TM4 1; FALSE NEG
Glycoprotein; Transmembrane.
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                                                                                                                                                                                                                                                                                                                  EMBL, AF054838; AAC69714.1; --
BMBL, AF05588; AAC7119.1; --
EMBL, AF13425; AAF08364.1; --
EMBL, BC007290; AAH07290.1; --
EMBL, BC013404; AAH13404.1; --
PIR; A59262; A59262.
H-INVDB; HIX0000543; --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00335; Tetraspannin; T.
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25-0CT-2004 (TrEMBLrel. 28,
25-0CT-2004 (TrEMBLrel. 28,
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1es 20; Conservative
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141
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241 AA;
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TRANSMEM
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1D 06AYR
AC 06AYR
DT 25-0
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Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C., Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J., Bosak S.P., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A., Hulyk S.W., Villalon D.K., Madan A., Young A.C., Shevchenko Y., Bolffard G.G., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C., Krzywinski M.I., Skalska U., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.B., Jones S.J., Marra M.A.,
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D.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schistosoma japonicum (Blood fluke).
Eukaryota, Metazoa; Platyhelminthes; Trematoda; Digenea; Strigeidida;
Schistosomatoidea; Schistosomatidae; Schistosoma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIINE=22879925; PubMed=12973349; DOI=10.1038/ng1236; MEDIINE=22879925; PubMed=12973349; DOI=10.1038/ng1236; M.R.R., Hu W., Yan Q., Shen D.K., Liu F., Zhu Z.D., Song H.D., Xu X.R., Wang Z.J., Rong Y.P., Zeng L.C., Wu J., Zhang X., Wang J.J., Xu X.N., Wang Z.Y., Fu G., Zhang X.L., Wang Z.Q., Brindley P.J., McManus D.P., Xue C.L., Peng Z., Chen Z., Han Z.G.; Brindley P.J., McManus D.P., "Brolutionary and biomedical implications of a Schistosoma japonicum complementary DNA resource."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 66.7%; Pred. No. 3.9;
Matches 8; Conservative 1; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Director MGC Project;
Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases
EMBL; BC078938; AAH78938.1; -.
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Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                      Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GO; GO:0016021; C:integral to membrane; IEA.
InterPro; IPR002229; RhesusRHD.
InterPro; IPR008952; Tetraspanin.
InterPro; IPR000301; Transmem 4.
Pfam; PF00335; Tetraspannin; 1.
PRINTS; PR00342; RHESUSRHD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          282 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00335; Tetraspannin; 1.
SEQUENCE 282 AA; 31153 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00421; TM4 1; 1.
SEQUENCE 241 AA; 26453 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genet. 35:139-147(2003).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 71.4%;
nes 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               165 KENKVFPPFCCANN 178
                                                                                                                                                                                                                                                                                                                                                                                               and mouse cDNA sequences.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Clone ZZD391 mRNA sequence
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AC 060779
DT 05-07
DT 05-07
DT 25-06
DE RESELVEN
COC BUREN
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Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
Sordariomycetidae; Sordariales; Sordariaceae; Neurospora.
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Bukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
Sordariomycetidae; Sordariales; Sordariaceae; Neurospora.
NCBI_TaxID=83678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Winefield R.D., Beever R.E., Newcomb R.D., Haverkamp R.G., Templeton M.D.; Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases. EMBL; AX577548; AAT40749.1; -GO, GO:0005618; C:cell wall; IEA. GO, GO:0005199; F:structural constituent of cell wall; IEA. InterPro; IPRO01338; Hydrophobin. PFON185; Hydrophobin. SMART; SM00075; HYDROPHOBIN; UNKNOWN_1.
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Winefield R.D., Beever R.E., Newcomb R.D., Haverkamp R.G.,
Templeton M.D.;
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL, AVS77547; AAT40748 1; -
EMBL, AVS77547; Fistructural constituent of cell wall; IEA.
InterPro; IPR001338; Hydrophobin.
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              Indele
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                                                                                                                                                                                                                                                                                                                                                                                     05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Basily wettable (Fragment).
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05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
Easily wettable (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44.0%; Score 51; DB 2; 72.7%; Pred. No. 2.5; Live 1; Mismatches
                                                                                                                                                                                                                                                                                                                        91 AA
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              Mismatches
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SMART; SM00075; HYDRO; 1.
PROSITE; PS00956; HYDROPHOBIN; UNKNOWN_1.
NOW TER 1 1
NON TER 91 91
SEQÜENCE 91 AA; 9063 MW; 0DDB476CGDB4
                                                                                                                                                                                                                                                                                                                        PRT;
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          8, Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity 72.7
nes 8; Conservative
                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
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                                                                           10 CCNDNVTNTAN 20
                                                                                                               77 CCKDDVTNTGN 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10 CCNDNVTNTAN 20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      [1] SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=40127;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=85A;
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NON TER
SEQUENCE
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Q6J766;
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          Matches.
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Matches
                                                                                                                                                                                                                                                RESULT 6
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05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
25-JUL-2004 (TrEMBLrel. 28, Last annotation update)
25-JUL-2004 (TrEMBLrel. 28, Last annotation update)
Basily wettable (Fragment) (Fragment).
Neurospora sitophila.
Bukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes; Sordariomycetidae; Sordariales; Sordariaceae; Neurospora.
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Sordariomycetidae, Sordariales, Sordariaceae, Neurospora,
NCBI_TaxID=29879;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (WAR-2004) to the EMBL/GenBank/DDBJ databases.
EMBL, ANS77557; AAT39533.1; -.
EMBL, ANS77550; AAT40751.1; -.
GO, GO:0005518; C:cell wall; IEA.
GO; GO:00055199; F:structural constituent of cell wall; IEA.
InterPro. 1 FR001338; Hydrophobin.
Fram; PP01185; Hydrophobin; 1.
SMORD75; HYDRO; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FTRAIN-Kirbyville-6; Winefield R.D., Haverkamp R.G., Winefield R.D., Beever R.E., Newcomb R.D., Haverkamp R.G., Submitted (R.D., Beever R.E., Newcomb R.D., Haverkamp R.G., Submitted (WAR-2004) to the EMBL/GenBank/DDBJ databases. EMBL; AY577551; AAT40752.1; -.. GO, GO:005518; C:cell wall; IEA. GO, GO:005518; F:structural constituent of cell wall; IEA. InterPro; IPR00138; Hydrophobin. Feam; PPG01185; Hydrophobin, 1. SWART; SW00075; HYDRO; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=P8085; Hinefield R.D., Beever R.E., Newcomb R.D., Haverkamp R.G., Templeton M.D.; Templ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 51; DB 2; Length 91;
Pred. No. 2.5;
1; Mismatches 2; Indels
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Pred. No. 2.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 91 AA; 9095 MW; EE02886C772C0220 CRC64;
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05-JUL-2004 (TrEMBLrel. 27, Created)
05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
                                                                                                                                                                        91 AA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   91 AA.
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                                                                                                                                                                     PRT;
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72.7%;
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198 NSKYPPFCCKFN 209
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                                                                                                                                                                     PRELIMINARY;
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Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
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Eukaryota; Fungi; Ascomycota; Pezizomycotina; Sordariomycetes;
Sordariomycetidae; Sordariales; Sordariaceae; Neurospora.
NCBI_TaxID=5141;
                                                                                                                                                                                                                                                                                                                                       Neurospora intermedia.

Bukaryota, Fungi, Ascomycota, Pezizomycotina, Sordariomycetes, Sordariomycetidae, Sordariales, Sordariaceae, Neurospora.

NCBI_TaxID=5142,
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GO; GO:0005618; C:cell wall; IEA.
GO; GO:0005199; F:structural constituent of cell wall; IEA.
InterPro; IPA.
Pfam; PF01185; Hydrophobin.
SMART; SM00075; HYDRO; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AYS77546; AAT40747.1; -
GO; GO:0005618; C:cell wall; IEA.
GO; GO:0005199; F:structural constituent of cell wall; IEA.
InterPro; IPR001338; Hydrophobin.
Pfam; PF01185; Hydrophobin; 1.
SMART; SM00075; HYDRO; 1.
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Winefield R.D., Beever R.E., Newcomb R.D., Haverkamp R.G.,
Templeton M.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 51; DB 2; Length 91;
Pred. No. 2.5;
1; Mismatches 2; Indels
                     Score 51; DB 2; Length 91;
Pred. No. 2.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=Taipei-1c;
Winefield R.D., Beever R.E., Newcomb R.D., Haverkamp R.G.
Templeton M.D.;
Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
                                                            2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (MAR-2004) to the EMBL/GenBank/DDBJ databases.
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Last annotation update)
                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
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                                                              1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PS00956; HYDROPHOBIN; UNKNOWN_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                        Created)
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72.78;
                                                                                                                                                                                                                                                 06-0768;
05-07L-2004 (TrEMBLrel. 27,
05-07L-2004 (TrEMBLrel. 27,
05-07L-2004 (TrEMBLrel. 27,
Easily wettable (Fragment).
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                         44.0%;
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       Conservative
                                                                                                                                                                                                                                 PRELIMINARY;
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                                                                                                  10 CCNDNVTNTAN 20
                                                                                                                                     77 CCKDDVTNTGN 87
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les 8; Conserv
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C66768
TO C65768
TO C657
TO C677
TO C
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SEQUENCE FROM N.A.

STRAIN=74-OR23-1A / FGSC 987;

STRAIN=74-OR23-1A / FGSC 987;

STRAIN=74-OR23-1A / FGSC 987;

STRAIN=74-OR23-1A / FGSC 987;

SA Galagan J.E., Calvo S.E., Borkovich K.A., Selker E.U., Read N.D.,

Jaffe D., FitzHugh W., Ma L.-J., Smirnov S., Purcell S., Rehman B.,

A Jaffe D., FitzHugh W., Mang S., Nielsen C.B., Butler J., Endrizzi M.,

Blkins T., Engels R., Wang S., Nielsen C.B., Butler J., Endrizzi M.,

AN Blkins T., Engels R., Wang S., Nielsen M.A.,

Werner-Washburne M., Selitrennikoff C.P., Kinsey J.A., Braun E.L.,

A marcotte E., Greenberg D., Roy A., Foley K., Naylor J.,

A marcotte E., Greenberg D., Roy A., Foley K., Naylor J.,

A marcotte E., Greenberg D., Roy A., Foley K., Naylor J.,

A marcotte E., Greenberg R.L., Perkins D.D., Kroken S., Cogoni C.,

A manusen C., Marcanberg R.L., Perkins D.D., Kroken S., Cogoni C.,

A machine G., Catcheside D., Liw W., Pratt R.J., Osmani S.A.,

DeSouza C.P., Glass L., Orbach M.J., Berglund J.A., Voelker R.,

A matvig D.O., Alex L.A., Mannhaupt G., Ebbole D.J., Freitag M.,

Antyig D.O., Alex L.A., Mannhaupt G., Ebbole D.J., Freitag M.,

Antyig D.O., Alex L.A., Mannhaupt G., Ebbole D.J., Freitag M.,

Natvig D.O., Alex L.A., Mannhaupt G., Ebbole D.J., Freitag M.,

Anture 422:859-868(2003).

The genome sequence of the filamentous fungus Neurospora crassa.";

Nature 422:859-868(2003).

The genome sequence of the filamentous fungus Neurospora crassa.";

Nature 422:859-868(2003).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RODL NEUCR STANDARD; PRT; 108 AA.

004571; 078C33;
01-0CT-1993 (Rel. 27, Created)
01-0CT-1993 (Rel. 44, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
Hydrophoin precursor (Rodlet protein) (Clock-controlled gene protein)
2) (Blue light induced protein 7).
Name=eas; Synonyms=bll-7, ccg-2; ORFNames=NCU08457.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
SERAMIN=74-OR23-1A / FGSC 987;
MEDLINE=390-9472; PubMed=1459460;
MEDLINE=390-9472; PubMed=1459460;
Bell-Pedersen D., Dunlap J.C., Loros J.J.;
"The Neurospora circadian clock-controlled gene, ccg-2, is allelic to eas and encodes a fungal hydrophobin required for formation of the condital rodlet layer.";
Genes Dev. 6:2382-2394(1992).
                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDINE=93093471; PubMed=1459459;
Lauter F.-R., Russo V.E.A., Yanofsky C.;
"Developmental and light regulation of eas, the structural gene for the rodlet protein of Neurospora.";
Genes Dev. 6:2373-2381(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eberle J., Russo V.E.A.; "Neurospora crassa blue-light-inducible gene bli-7 encodes a short hydrophobic protein.";
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0
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Sordariomycetidae, Sordariales, Sordariaceae, Neurospora.
                                                                       Length 91;
                                                                                                                                              2; Indels
ODDB476C6D8460EA CRC64;
                                                                   Score 51; DB 2;
Pred. No. 2.5;
1; Mismatches
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                                                                           44.08;
                                   Query Match
Best Local Similarity 72...,
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NA Seg. 3:131-141(1992).
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                                                                                                                                                                                                                                                                            77 CCKDDVTNTGN 87
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Neurospora crassa.
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PIR; D34027; VCLJE4
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                                                                                                                                    TRANSMEM
TRANSMEM
TRANSMEM
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                                                                                                           CHAIN
                                                                                                CHAIN
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                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its most by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
reproductive structures, dispersal of aerial spores and adhesion of pathogens to host structures. Important for the formation of hydrophobic rodlet layers of asexually-produced spores. SUBCELLULAR LOCATION: Secreted.

DEVELOPMENTAL STAGE: Accumulates during conidation but not during
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-88072070; PubMed=2825406;
Payne S.L., Fang F.D., Liu C.P., Dhruva B.R., Rwambo P., Issel C.J.,
Montelaro R.C.;
"Antigenic variation and lentivirus persistence: variations in
envelope gene sequences during EIAV infection resemble changes
reported for sequential isolates of HIV.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                INDUCTION: Expression is controlled by blue light and by a circadian clock. Also induced by glucose, nitrogen and carbon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENV polyprotein precursor (Coat polyprotein) [Contains: Coat GP90; Coat protein GP45].
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 51; DB 1; Length 108;
Pred. No. 3;
1; Mismatches 2; Indels
                                                                                                                        SIMILARITY: Belongs to the fungal hydrophobin family.
                                                                                                                                                                                                                                                                                                                                                                                           Hydrophobin.
7BB75992A9C173E9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Equine infectious anemia virus (clone P3.2-5) (EIAV).
Viruses; Retroid viruses; Retroviridae; Lentivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-AUG-1991 (Rel. 19, Created)
01-AUG-1991 (Rel. 19, Last sequence update)
05-JUL-2004 (Rel. 44, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      860 AA
                                                                                                                                                                                                                                                                                                                                                                                  Potential
                                                                                                                                                                                                                                                                                EMBL; AABXO1000139; EAA34064.1; -.
PIR; A46222; A46222.
InterPro; IPR001338; Hydrophobin.
Pfam; PP01185; Hydrophobin; 1.
SWART; SM00075; HYDRO; 1.
                                                                                                                                                                                                                                                                                                                                        SMART; SM00075; HYDRO; 1.
PROSITE; PS00956; HYDROPHOBIN; 1.
                                                                                                                                                                                                                                                                                                                                                                                                         10875 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                    44.0%;
72.7%;
                                                                                                                                                                                                                                                         EMBL; X67339; CAA47754.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 72.7
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        || |:|||| |
CCKDDVTNTGN 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10 CCNDNVTNTAN 20
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108
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                                                                                                                                                                                                                                                                                                                                                                                                         108 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=11669;
                                                                                                                                                                                                                                                                                                                                                                 Cell wall; Signal
                                                                                                            starvation.
                                                                     germination
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P22430;
                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                  SIGNAL
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ENV EIAVS
ENV EIAVS
ENV EIAVS
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DT 01-AU
DT 01-AU
DT 05-UU
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STRAIN=C57BL/6; TISSUE=Brain;
PubMed=12477932, DOI=10.1073/pnss.242603899;
PubMed=12477932, DOI=10.1073/pnss.242603899;
Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,
Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.
Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
NCBI TaxID=10090;
InterPro; IPR001027; Gp45_BIAV.
InterPro; IPR001361; Gp90_BIAV.
Pfam; PF01045; BIAV GP45; 1.
Pfam; PF00971; BIAV_GP90; 1.
Coat protein; Glycoptotein; Polyprotein; Signal; Transmembrane.
SIGNAL
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Last annotation update)
                                                                            Potential.
Bnv polyprotein.
Coat protein GP90.
Coat protein GP45.
Potential.
Potential.
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                                                                                                                                                                                   Potential.
Potential.
N-linked (
N-linked (
N-linked (
N-linked (
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N-linked
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97020 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       44.48;
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EENTIFQPYCYNNNSKNS
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Best Local Similarity
Local 8; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            551
558
753
860 AA;
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SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN=FVB/N, TISSUE=Salivary gland;

STRAIN=FVB/N, TISSUE=Salivary gland;

MEDINE=22388257; PubMed=12477932; DOI=10.1073/pnas.242603899;

X Straubberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Alschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

A platchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

A platchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Uddin T.B., Toshiyuki S., Carninci P., Parange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Robars S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,

Richards S., Worlby D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M., Butterfield Y.S.,

Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.E.,
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            Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H., Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W., Villaton D.K., Muzny D.M., Sodergren B.J., Lu X., Gibbs R.A., Fahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A., Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G., Blakeeley R.W., Touchman J.W., Green B.D., Dickson M.C., Krzywinski M.I., Skalska U., Schmutz J., Myers R.M., Butterfield Y.S., Krzywinski M.I., Skalska U., Smailus D.E., Schnerch A., Schein J.B., Generation and initial analysis of more than 15,000 full-length human and mouse CDNA sequences.";
, Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
Seizure related 6 homolog (Mouse)-like 2 (Mus musculus adult male diencephalon cDNA, RIKEN full-length enriched library, clone;9330155624 product:TYPE I TRANSMEMBRANE RECEPTOR homolog).
Name=Sez612;
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Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi;
Mammalia, Eutheria, Rodentia, Sciurognathi, Muridae, Murinae, Mus.
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SEQUENCE FROM N.A.
STRAIN=CSTBL/6; TISSUB=Brain;
Director MGC Project
Submitted (AUG-2004) to the EMBL/GenBank/DDBJ databases.
EMBL; BC075573; AAH79573.1;
Interpro; IPR000865; CUB.
Interpro; IPR000436; Sushi_SCR_CCP.
Pfam; PF00431; CUB; 2.
Pfam; PF00431; CUB; 2.
SMART; SM00032; CCP; 3.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           863 AA; 93371 MW; 82AC231639C0EB75 CRC64;
                                                                                                                                                                                                                                                                                             Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
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400 EEDRCFPPFLAHGNVTTT 417
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PROSITE; PS50923; SUSHI; 5.
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Adachi J., Aizawa K., Akimura T., Arakawa T., Bono H., Carninci P., Rukuda S., Furuno M., Hanagaki T., Hara A. Hashizume W., Hayashida K., Hayatsu N., Hiramoto K., Hiracka T., Hirozane T., Hori F., Imotani K., Hayatsu N., Hiramoto K., Hiracka T., Hirozane T., Akatoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S., Katoh H., Kawai J., Kojima Y., Kondo S., Konno H., Kouda M., Koya S., Nishi K., Nomura K., Numazaki A., Murata M., Nakamura M., Nishi K., Nomura K., Numazaki R., Ohno M., Ohsato N., Okazaki Y., Saito R., Saitoh H., Sakai C., Sakai K., Sakazume N., Sano H., Saski D., Shibata K., Shinagawa A., Shiraki T., Sogabe Y., Tagami M., Tagawa A., Takahashi F., Takaku-Akahira S., Takeda Y., Tagami M., Tomaru A., Toya T., Yasunishi A., Muramatsu M., Hayashizaki Y.; Subit G. (JUL-2001) to the EMBL/GenBank/DDBJ databases.

BENEL, AKO1475, AAH11475.1; -.
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STRAIN=C57BL/6J; TISSUE=Diencephalon;

STRAIN=C57BL/6J; TISSUE=Diencephalon;

STRAIN=C57BL/6J; TISSUE=Diencephalon;

A Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Shibata K., Itoh M., Aizawa K., Nagaoka S., Sasaki N., Carninci P., Konno H., Akiyama J., Nishi K., Kitsunai T., Tashiro H., Itoh M., Sumi N., Ishii Y., Nakamura S., Hazama M., Nishine T., Harada A., Yamameto R., Ishikawa T., Cagwa Y., Itegawa T., Kashiwagi K., Yoneda Y., Ishikawa T., Ozawa K., Tanaka T., Matsuura S., Kawai J., Yokazaki Y., Muramatsu M., Inoue Y., Kira A., Hayashizaki Y.;

RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer.";
Jones S.J., Marra M.A.; 'Generation and initial analysis of more than 15,000 full-length human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
STRANIE-STRE/FOX; TISSUE-Diencephalon;
The FANTOM Consortium,
the RIKEN Genome Exploration Research Group Phase I & II Team;
the RIKEN Genome Exploration Research Group Phase I & II Team;
"Analysis of the mouse transcriptome based on functional annotation of
60,770 full-length cDNAs.";
Nature 420:563-573 (2002).
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SEQUENCE FROM N.A.
STRANN=C57BL/G17 IISSUE=Diencephalon;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
MEDLINE=20499374; PubMed=11042159; DOI=10.1101/gr.145100;
Carninci P., Shibata Y., Hayatsu N., Sugahara Y., Shibata K., Itoh M.,
Konno H., Okazaki Y., Muramatsu M., Hayashizaki Y.;
Normalization and subtraction of cap-trapper-selected cDNAs to
prepare full-length cDNA libraries for rapid discovery of new genes.";
Genome Res. 10:1617-1630(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=C57BL/6J; TISSUE=Diencephalon;
MEDLINE=99279253; PubMed=10349636; DOI=10.1016/S0076-6879(99)03004-9;
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STRAIN=C57BL/63; TISSUE-Diencephalon;
MEDLINE=21085660; PubMed=11217851; DOI=10.1038/35055500;
                                                                                                                                                                                                                                                                                                                               Strausberg R.;
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                              roc. Natl. Acad. Sci. U.S.A. 99:16899-16903(2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Carninci P., Hayashizaki Y.;
"High-efficiency full-length cDNA cloning.";
Meth. Enzymol. 303:19-44(1999).
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STRAIN-C57BL/6J; TISSUE-Diencephalon;
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STRAIN=FVB/N; TISSUE=Salivary gland;
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01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
25-OCT-2004 (TrEMBLrel. 28, Last annotation update)
RIKEN CDNA 9030418M05 (Mus musculus adult male colon CDNA, RIKEN full-length enriched library, clone:9030418M05 product:similar to tetraspan TSPAN-1).
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Sukaryota; Metazoa, Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
NCBI_TaxID=10090;
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GO; GO:000519; F: Setructural constituent of cell wall; IEA.
GO; GO:0005199; F: Setructural constituent of cell wall; IEA.
InterPro; IPR001338; Hydrophobin.
Pfam; PP01185; Hydrophobin; 1...
SMART; SM00075; HYBRO; 1...
                                                                                                                                                                                                             h similarity 50.0%; Pred. No. 28; Similarity 50.0%; Pred. No. 28; 9; Conservative 3; Mismatches 6: Indels
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Winefield R.D., Beever R.E., Newcomb R.D., Haverkamp R.G.,
Templeton M.D.;
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                                                                                                                                                                             923 AA; 99077 MW; DD15A1DF50848889 CRC64;
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      membrane; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                         91 AA.
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GO; GO:0016021; C:integral to membrane; I
GO; GO:0004872; F:receptor activity; IEA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
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460 BEDRCFPPFLAHGNVTTT 477
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PROSITE, PS50923; SUSHI; 5.
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                                      Pfam; PF00431; CUB; 2.
Pfam; PF00084; Sushi; 5.
SMART; SM00032; CCP; 5.
SMART; SM00042; CUB; 3.
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                                                                                                                                                          Receptor; Transmembrane
SEQUENCE 923 AA; 9907
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Name=9030418M05Rik;
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nes 8; Conserv
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SEQUENCE
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Q6J765;
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Adachi J., Aizawa K., Akahira S., Akimura T., Aono H., Arai A.,

Adachi J., Aizawa K., Akahira S., Akimura T., Aono H., Arai A.,

Adachi J., Aizawa K., Akahira S., Akimurah Y., Furuno M.,

Arakawa T., Bono H., Carninci P., Fukuda S., Fukuda T., Hori F.,

Hanagaki T., Hara A., Hayatsu N., Hiramoto K., Hiraoka T., Kato H.,

A matsuyama T., Miyazaki A., Nishi K., Nomura K., Numazaki R., Ohno M.,

A chazaki Y., Konno H., Koda M., Koya S., Kurihara C.,

A chazaki Y., Okido T., Owa C., Saito H., Saito R., Sakai K.,

A sano H., Sasaki D., Shibata K., Shibata Y., Shinagawa A., Shiraki T.,

A somber Y., Okido T., Owa C., Saito H., Saito R., Sakai K.,

A somber Y., Colido T., Owa C., Saito H., Saito R., Sakai K.,

A somber Y., Colido T., Yamamura T., Yamanaka I., Yasunishi R., Tanaka T.,

A toshida K., Yoshino M., Muramatsu M., Hayashizaki Y.,

Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.

BMBL, BCC003448; AAH03448.1; -

Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.

BMBL, AK078869; BAC37448.1; -

Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.

ROJ GO:0016021; C:integral to membrane; TAS.

ROJ GO:0016021; C:integral to membrane; TAS.

InterPro; IPR000305; Tetraspanin.

BRINTS; PR00335; Tetraspanin.

RESPUENCE: PR00329; TRESUSRHD.

BRINTS; PR00329; TRESUSRHD.

BRINTS; PR00329; TRESUSRHD.

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BROSITE; PS00421; TWA I; 1.
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Genome Res. 10:1757-1771(2000).
[8]
SEQUENCE FROM N.A.
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Gaps

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Best Local Similarity 72.7 Matches 8; Conservative

Search completed: February 5, 2005, 20:04:44 Job time: 96.9153 secs